

# American Aviation

MANAGEMENT  
ENGINEERING  
OPERATIONS  
MAINTENANCE  
EQUIPMENT

**AUGUST 4**

1952

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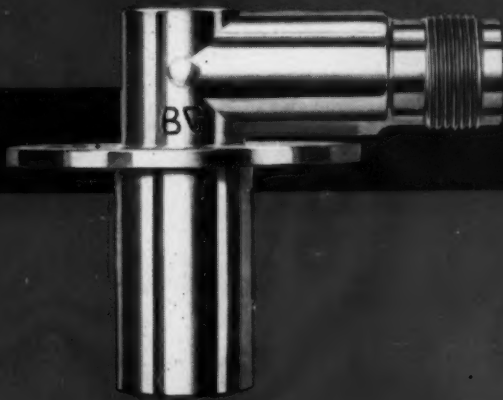
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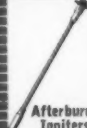
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# AIRTRENDS

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Nomination of Senator John J. Sparkman as the Democratic vice-presidential candidate has important significance to the airline industry. Sparkman, as chairman of the Senate Small Business Committee, has championed the cause of the non-scheduled airlines.

•

By contrast with the Republican Party platform, which called for adequate air power with no mention of air transportation, the Democratic platform called for continued Government support of air transport with no mention of general air power. Platform endorsed a "policy of fostering the safest and most reliable air transportation system in the world."

•

Convair is expected to move into a prominent role in the growing industry interest in development of a commercial jet transport. Previously Lockheed, Douglas, and Boeing were considered the only serious contenders among U. S. manufacturers.

•

Cessna is now working on the design of a twin-engine transport to compete with the Aero Commander, Twin Beech, de Havilland Dove, and Twin Piper, the four other designs now making inroads into the executive aircraft market. No details are available as yet.

•

APB's controversial staff study on the multiplicity of plane types also made sweeping recommendations regarding aircraft engines, the general tenor of which called for accelerating the move to more powerful engines. It suggested wiping out the Westinghouse J-40 and Wright J-65 Sapphire, de-emphasizing production of piston engines such as the Wright R-3350 and P&W R-4360, and ordered phase-in of the Allison T-40 to replace piston types.

•

TWA's actual mail rates under its current temporary rates are appreciably below the 85¢ per ton-mile deemed as compensatory without subsidy by CAB in its recent international subsidy report. At the 85¢ rate TWA would get slightly over \$4 million in service pay next year, while at its present rate it will get \$3.2 million.

•

Talk has been revived of consolidating all offices of the Civil Aeronautics Board under one roof in Washington. Commerce Department, which houses offices of the Board members and certain top officials, now wants the space for its own agencies. Majority of CAB offices are now in a World War II temporary building and the Board members may soon share these quarters.

•

Plans to use the Atar jet engine in France's SNCASE 210 and SNCASO 60 jet transports have been dropped and British and American engines are now under consideration for the French aircraft.

•

Approval of rapid tax write-offs for transport aircraft is expected again as soon as the formalities are completed between the Defense Production Administration, which must approve the write-offs, and the Defense Air Transportation Administration and Defense Department.

•

Two of the four aircraft manufacturing centers labeled "areas of labor shortage" last July have since been designated "areas of balanced labor supply" by the labor Department. These cities are Indianapolis and San Diego. Wichita and Hartford remain in the critical category.

# The Washington View

## The Aftermath

**T**HERE IS NOW no doubt that both the airlines and the Armed Services soon will have to pay more for the planes they order. Settlement of the prolonged steel strike, which brought with it Government approval for a \$5.20-a-ton hike in the price of carbon steel, will mean that the aircraft industry will have to pay more for the various types of steel used in aircraft construction as well as for other materials like aluminum, glass, rubber, and plastics, which also will increase in price as an indirect result of the steel boost.

From a national security viewpoint, the money appropriated by Congress to attain a 143-wing Air Force by mid-1955 will not go as far as had been hoped. It is inevitable that Defense leaders will have to come back for many supplemental appropriations so that the Navy and Air Force can purchase the same number of planes they had anticipated.

The airlines, too, will suffer as a result of what promises to be a new inflationary spiral. Faced with rising costs and high taxes, many of the nation's air carriers may well be forced to use red ink rather than black for their financial reports as a result of the latest setback.

While the resumption of steel production foreshadowed many new problems, it did, however, come in time to avert any serious delays in aircraft output. Just before the agreement on a new steel contract, many aircraft firms were making plans for delayed deliveries and shortened work weeks. But it now appears that previously planned aircraft production schedules will be maintained, even though some aircraft suppliers had started cutting back.

## The Spreading Union Shop

The modified union shop clause incorporated in the new steel agreements, incidentally, is bound to have a direct influence on several firms in the aircraft industry which, like the steel companies, have opposed the union shop on the ground that it compels workers to sign up against their will.

General Electric-Lockland, Boeing, Ryan, and Douglass have all told the CIO-Autoworkers or the AFL-Machinists that they would not grant a union shop under any circumstances. But they will have a much harder time convincing the two unions now that a nationwide pattern for a form of union shop has been agreed to in the steel industry.

The compromise has advantages for both sides: newly hired workers must apply for union membership but may withdraw their application 15 days later without losing their positions. Old workers need not sign up at all. Both groups of steel employees can drop their union membership within 15 days of the expiration of the contract.

Under this agreement the Steelworkers union will undoubtedly pick up more members than it normally would because the application for USW membership is automatic and the request for withdrawal takes extra effort. Yet the companies have won their fight against compulsory membership. Neither side is happy about the agreement but both won concessions.

The aircraft unions will demand at least the modified union shop approved by the steel companies when they start new negotiations and such holdouts as GE, Douglas, and the rest may have to give in or face crippling strikes which would ostensibly be over wages or other conditions but which would actually boil down to the demand for more or less compulsory union membership.

## From Guns to Butter

NPA approval of a request by the machine tool industry that tool builders be permitted to accept orders from non-defense producers indicates how quickly military requirements can change. Just a little over six months ago, the then Defense Mobilizer, Charles E. Wilson, told machine tool manufacturers they would have to quit taking orders from civilian durable goods makers because the defense program needed them badly.

But the stretchout in aircraft and other defense production forced the cancellation of many tools orders and the tool industry found that it was not operating at capacity. As a matter of fact, two-thirds of the industry was not using all its productive capacity and NPA was asked to change its edict. The easing on acceptance of non-rated orders, however, does not apply to nine types of tools which are still critical as far as the military is concerned.

## The Pilots and the Union

It may seem strange that the American Federation of Labor has taken no action to try to prevent the 7,500 pilots in the Air Line Pilots Association from seceding and setting up an independent union outside of the AFL, but AFL president William Green has learned to keep out of David L. Behncke's affairs.

Two or three years ago Green tried to make some recommendations to Behncke and was told to mind his own business. Since that time the AFL leader has refrained from interfering in ALPA. But it is a safe bet that if the newly organized Air Transport Pilots Association replaces ALPA, Green will try to bring the pilots back into the AFL. Many of the pilots question the advantages of belonging to the AFL or the CIO. They seem to feel they can do equally well remaining independent.

... Robert M. Loebelson





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American Aviation is published every other Monday by American Aviation Publications Inc., Washington, D. C. Printed at the Telegraph Press, Harrisburg, Pa. Subscription rates for United States, Canada, Mexico, Central and South American countries—\$5.00 for 1 year; \$8.00 for 2 years; \$10.00 for 3 years. All other countries—\$7.00 for 1 year; \$12.00 for 2 years. Entered as Second-Class matter in Washington, D. C., and Harrisburg, Pa.

Change of Address: Send old address (exactly as it appears on mailing label of your copy of magazine) and new address, including zone number, if any. Allow two weeks for change-over.

Publishing Corporation: American Aviation Publications, Inc., Wayne W. Parrish, president; Leonard Eisner, vice-president and general manager; Albert H. Stackpole, Eric Bramley, vice presidents; E. J. Stackpole, Jr., secretary-treasurer.

West Coast Office: Park Central Building, 412 West Sixth St., Los Angeles 14, Calif. Trinity 7997. Fred S. Hunter, manager.

Chicago Office: 139 North Clark St., Chicago 2, Ill. Central 6-5804. Bruce L. McGregor, regional advertising manager.

Foreign Advertising Representative: United Kingdom—Pearl, Cooper Ltd., 2-3 Norfolk St., Strand, London, W. C. 2. Tel. Temple Bar 8111/2.

American Aviation incorporates Airports and Air Carriers, Airports, Aviation Equipment, The American Pilot, Aviation Sales and Service, U. S. Aviation and American Airports. All rights to these names are reserved.



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## other publications

**American Aviation Daily** (including International Aviation): Published daily except Saturdays, Sundays and holidays. Subscriptions: \$18 one month; \$200 one year. Keith Saunders, managing editor.

**American Aviation Directory**: Published twice a year, spring and fall. Single copy, \$7.50. Marion E. Grambow, managing editor.

**Official Airline Guide**: Monthly publication of airline schedules and fares. Subscriptions: U. S. A. and countries belonging to the Pan American Postal Union, including Spain and the Philippines, \$11.00 one year, Canada, \$11.50. All other countries, \$12.50. Published from editorial offices at 139 North Clark St., Chicago 2, Ill. Central 6-5804. C. N. Johnson, managing editor.

**American Aviation Traffic News** (incorporating Air Tariff Reports): Published daily except Saturdays, Sundays and holidays. Subscriptions: \$150 a year. Preble Staver, managing editor.



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## Letters

Letters should be addressed to The Editor, American Aviation Magazine, 1025 Vermont Ave., N.W., Washington 5, D. C. Anonymous letters will not be printed, but names will be withheld upon request.

### 19 SAFE YEARS

To The Editor:

Someone by now has probably called your attention to the typographical error in the item under trends in your July 7th issue of AMERICAN AVIATION. It was Northeast—not Northwest—which has attained a record of over 15 years without fatality.

I'm sure you will agree the personnel of this organization who have made possible almost 19 years of safe operation without a fatality in our entire operating history should receive the recognition they deserve and I will very much appreciate it if you will publish a correction. Thanks very much.

ROBERT L. TURNER

Vice President—Sales  
 Northeast Airlines, Inc.  
 Boston 28, Mass.

### EXCELLENT COVERAGE

To The Editor:

We wish to express our appreciation of the excellent coverage in the June 23, 1952, issue of AMERICAN AVIATION of the Jacobs Model 104 helicopter.

We would appreciate, if possible, receiving ten (10) reprints of this article for distribution to aviation personnel who did not have the opportunity of reading the published article.

H. E. LEMONT, JR.

Chief Engineer—Development  
 Jacobs Aircraft Engine Company  
 Pottstown, Penna.

### NO CONNECTION

To the Editor:

I would like to call your attention to page 20 of the July 7 issue of AMERICAN AVIATION.

In the article, "Civil Aviation Returns to Japan," it is stated that "JAL has been operating . . . with Martin 202's and Douglas DC-4's leased from Northwest Airlines and Philippine Air Lines . . ."

Actually, this is not the case. PAL does not have on lease to JAL any equipment now, nor was that the case in the past. We have, as a matter of fact, no connection with the carrier.

I thought you might like merely to make a note of it in your files in the event the matter comes up in the future. From our standpoint, it would serve no particular purpose to make any correction as the point is of no great significance.

P. K. MACKER

Director of Public Relations  
 Philippine Air Lines  
 San Francisco 8, Calif.

AMERICAN AVIATION



## GROUND SAFETY

To The Editor:

I have just finished reading **AMERICAN AVIATION** dated July 7, 1952, and am extremely interested in the article appearing on page 51, "Crash Fire Equipment Key to Ground Safety."

Would you be able to tell me if there were any minutes taken and published on this meeting. If so, whom I could contact in regards to obtaining further data on the subjects discussed. I am particularly interested in the information presented by Mr. George Prussing, consultant engineer.

Any information that you could give me would be greatly appreciated.

J. L. PETTIT

Chief Plant Engineer  
Consolidated Vultee Aircraft Corporation  
San Diego 12, California

## Wings of Yesterday

### 25 YEARS AGO

On July 1, 1927, the Boeing Airplane Company took over from the Post Office Department the operation of the western division of the transcontinental air mail service between Chicago and San Francisco. The eastern division, New York-Chicago, was to be turned over to National Air Transport, Inc., on August 15 or September 1. Passenger service was available on both these routes, opening a new chapter in the development of American commercial aviation.

Clarence M. Young was appointed director of the Aeronautics Branch, Department of Commerce.

During the first year of operation planes of National Air Transport, Inc., operating the Chicago-Dallas air mail line, flew 700,518 miles on scheduled flights, carried 107,000 lbs. of mail and completed 95.8% of the mileage scheduled.

To promote and develop passenger airlines in the U.S. The Daniel Guggenheim Fund for the Promotion of Aeronautics authorized equipment loans to be made only to existing operating companies, for the purchase of the most modern, multi-engined planes of maximum safety and comfort.

The Stout Metal Airplane Company, division of the Ford Motor Company, produced the 4-AT, a three-engined, 12-passenger transport plane designed especially for airline work. The plane, built entirely of metal, had a cruising range of 500 miles.

The contract for carrying mail by air between Key West, Fla., and Havana, Cuba, was awarded to Pan-American Airways, Inc.

Arthur C. Goebel and Lt. W. V. Davis, flying a Travel Air monoplane, captured first prize of \$25,000 offered by James D. Doyle of Hawaii, for a non-stop flight from the American mainland to Hawaii.

AUGUST 4, 1952



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# Meet Your Editors



Henzey

IT'S BEEN KEPT strictly hush-hush around AMERICAN AVIATION's editorial offices that a *railroad*, of all things, almost claimed the business career of Transport Editor William Vincent Henzey.

Better let Bill tell you about that incident: "It seems that I was graduated from high school in 1937, the very same year that AMERICAN AVIATION was founded. After business school and a series of odd jobs—this being a recession period—I then had a choice of joining the Lehigh Valley Railroad in Pittston, Pa., my home town, or coming with the Civil Aeronautics Board in Washington. I wasn't taking any chances in those days. I had feelers out in both places!

"Crowded phone cables are responsible for the result. The night before I accepted a tariff analyst's position with the CAB, my folks tried reaching me long distance about the railroad job opening up. The call didn't get through . . ."

Bill spent two years with the CAB gaining valuable background and direction in that end of the industry. In 1945 he went to Chicago & Southern Air Lines, in Memphis, as a tariff specialist, and rose to the position of manager of tariffs. Evenings, Bill spent his time adding to his education by studying law.

In early 1949, American Aviation Publications sought Bill's talents. His first position was editing *Air Tariff Reports*, which has since become our *Traffic News*. Then Bill was assigned to cover CAB developments for the *Daily* and the magazine. In 1950, Bill became transport editor and has served in this post ever since.

There are three claims to aviation newswriting distinction that Bill can make. He is the first newsman ever to issue daily accounts of tariff and rate actions of the airlines in the United States. Second, he is the only member of the press, as far as we know, who attends every CAB hearing, oral argument, and conference . . . Third, Bill won two *TWA Annual Aviation Awards* in a row! He took the Mid-Century 1950 prize for the Best Business Financial Story, Technical Class, and last year copped the 14th annual TWA Aviation Writing Award for Best Business & Financial Story, Technical Class, again!

Bill may also claim a fourth "distinction" in the industry. While he was with Chicago & Southern, he fell in love with his secretary Dorothy and promptly married the gal. They now live in Arlington, Virginia, with their family—son Billy, 4, and daughter Sheila, lately turned one.

• • •

If you question Bill Henzey closely, he will admit that AMERICAN AVIATION magazine was greatly responsible for helping him up the ladder. Bill started reading AMERICAN AVIATION back in '43—long before he ever dreamed he would become our transport editor. Evidently Bill received sufficient information and value from AMERICAN AVIATION's features and service to help him get his position with C&S and then advance on this job.

Bill Henzey's experience with AMERICAN AVIATION was typical of that of our readers during that time. It is typical of the experiences of the many thousands of readers today, who benefit from the services of the magazine's highly specialized news-gathering staff which is serving air transportation and the entire industry as well.

## When & Where

- Aug. 11-13—Society of Automotive Engineers, West Coast Meeting, San Francisco.
- Aug. 28-30—National Aeronautic Association, Annual Meeting, Fort Shelby Hotel, Detroit.
- Aug. 28-31—Air Force Association, Annual Convention, Detroit.
- Aug. 30-Sept. 1—5th Annual Int'l. Aviation Exposition, sponsored by Aero Club of Michigan, Detroit-Wayne Major Airport.
- Sept. 1-5—1952 International Symposium on Combustion, Mass. Institute of Technology, Cambridge, Mass.
- Sept. 1-8—1952 Int'l. Symposium on Combustion, Mass. Institute of Technology, Cambridge, Mass.
- Sept. 8-10—3rd National Standardization Conference, sponsored by American Standards Assn., Museum of Science & Industry, Chicago.
- Sept. 8-12—Instrument Society of America, 6th National Meeting, Cleveland, Ohio.
- Sept. 23-25—Air Transport Association, Engineering & Maintenance Conference, Saxony Hotel, Miami Beach, Fla.
- Sept. 29-Oct. 1—National Electronics Conference, Sheraton Hotel, Chicago.
- Sept. 30-Oct. 2—Aircraft Spark Plug & Ignition Conference, Champion Spark Plug Company, Toledo, Ohio.

## International

- Aug. 19—ICAO, Aeronautical Information Services (AIS), 1st Session, Montreal.
- Aug. 20-28—8th Int'l Congress on Theoretical & Applied Mechanics, Istanbul.
- Sept. 1-7—Society of British Aircraft Constructors, Annual Display, Farnborough, England.
- Sept. 15-19—IATA, Eighth Annual General Meeting, Geneva.
- Sept. 16—ICAO, Statistics Division (STA), 2nd Session, Montreal.
- Sept. 19—Conference of the Revision of Rome Convention (under auspices of ICAO), Rome.

## Editorial

# Bad Faith and False Economy

CIVIL AVIATION has come to realize during the past several years that it has no friend in Secretary of Commerce Charles Sawyer.

But it is just awakening to the fact that even though Mr. Sawyer will undoubtedly be replaced as Secretary of Commerce when the new administration comes into office next January 20, Mr. Sawyer's

negative and restrictive influence on the Federal-aid airport program will be carried far into the future—to June 30, 1954, to be exact.

On the false premise of economy, Mr. Sawyer has failed miserably to administer the Federal-aid airport

program which Congress legislated in 1946. For the fiscal year which began July 1, the CAA has only \$11,750,000 to match local city funds for airport construction and improvements. A great many vitally needed projects must be postponed or abandoned.

Yet there would be hope if Mr. Sawyer were merely to bow out next January and a more realistic and reasonable appropriation could be obtained for the next fiscal year starting July 1, 1953. But the budget for that year—1953-54—is already in preparation and must be in the hands of Congress by January 3, seventeen days before the new Administration takes over. So Mr. Sawyer's false economy extends.

### Why Such Power?

The reader may well ask why Mr. Sawyer has such power over the Federal-aid airport program. It is a long and interesting story, but suffice it to say here that Congress in 1938 created the CAA as an independent government agency. It was aviation's first real break. A few years later the White House merged CAA into the Department of Commerce in a streamlining move and year by year since then CAA has increasingly lost its independence. More than his predecessors, Secretary Sawyer has moved in with an iron hand. It has been tragic that civil aviation lost its own independent agency and returned to being part and parcel of the Commerce Department.

Another feature of the present dilemma by which civil aviation is being choked into submission is the position of CAA Administrator. The Administrator reports to the Secretary, but earlier Administrators assumed a considerable amount of independence and fought hard for their aviation projects.

The present CAA Administrator is Charles Horne, one of the most conscientious, sincere, and hard-working men ever to fill that position. But

Charlie Horne's entire life until he came with CAA as head of Federal airways had been spent in the Navy. In the Navy one takes orders from above and delivers them below. An order is an order. You protest up to a point—then abide by the superior ruling.

Without any doubt Charlie Horne firmly believes he has fought hard for aviation's needs. But when Secretary Sawyer lowered the boom on airport funds with a tone of finality, Charlie Horne accepted the verdict. He is not one to undercut his boss or to short-circuit him. That's the difference between Horne and some of his predecessors.

### No Champion

The result is that civil aviation has no fighting champion in government today—no one who keeps on fighting because he believes the national defense requires more and better airports regardless of a cabinet officer's stubborn refusal to listen. It is understandable that a career Navy man considers such fighting heretical. But the net result is that civil aviation lacks a crusader in government who will fight its battles.

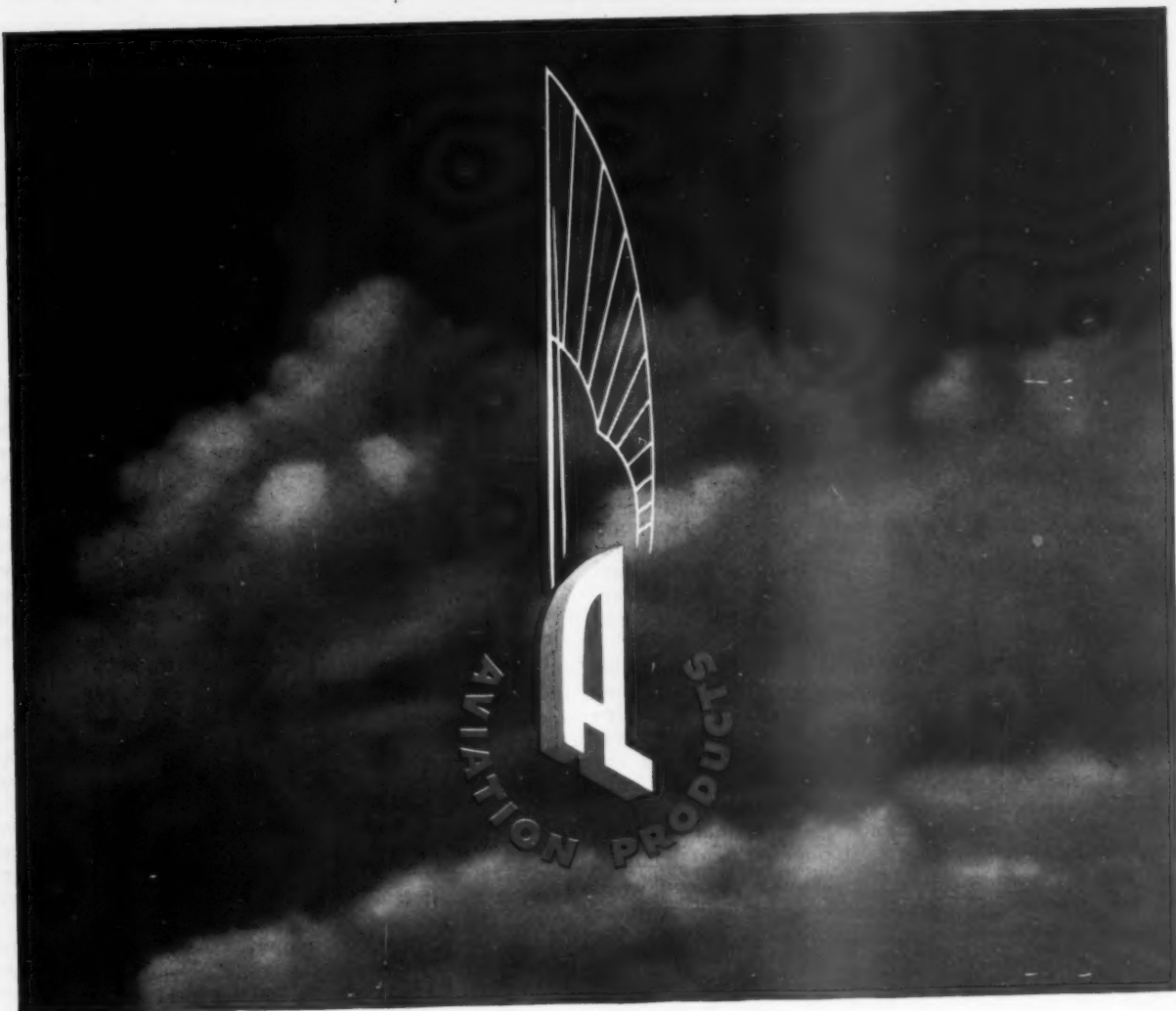
Nobody wants higher taxes. Everybody wants economy. To that end Secretary of Commerce Sawyer is to be commended. But what he has failed to understand is that knifing a matching-fund Federal-aid airport program is not economy. It is utterly ridiculous—one can go so far as to use the term juvenile—to spend scores of billions on military aviation and civil defense and stockpiling and all the rest and at the same time fail to improve airports.

But it is more than just being nonsensical from a defense standpoint. It is sheer bad faith to the hundreds of communities throughout the country which took Congress at its word and raised funds locally to match with Federal funds for airport construction. It was the full intent of Congress to implement the 1946 Act. Yet Mr. Sawyer has set himself up as an autocratic one-man veto power to deny the communities the Federal aid which Congress voted.

### Let the Country Decide

It will take years to get the airport program back on its feet. Mr. Sawyer was solely responsible for the cut in funds last year, but everybody thought this was a temporary move in the light of re-armament. He repeated his demonstration of bad faith again this year. And worse yet, he is repeating it again in his budget recommendations which must be in the hands of Congress by next January 3. That is, unless in the meantime he decides to permit the country to decide for itself what it wants to spend for a vital facility for defense and commerce.

... WAYNE W. PARRISH



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AMERICAN AVIATION



## Danger & Dilemma-'Too Many Types, Too Few Planes'

THE QUESTION of whether the Air Force and Navy operate too many different types of aircraft has come in for casual scrutiny from time to time in the last few years, but now it is getting close observation. The situation will come to a head this week when the Aircraft Production Board meets to consider the proposals of an APB staff study of the subject.

This staff study, if implemented, would have a terrific impact on the aircraft industry. It would cause considerable reshuffling of backlogs and deal heavy blows, backlog-wise, to some companies.

Briefly, the staff study, a topic of tremendous interest and wide discussion in aircraft procurement circles, suggests a completely new military aircraft production program, eliminating some aircraft types completely in the theory that expansion problems in the production field can be dealt with much more efficiently if there is a concentration on fewer models.

In the original fiscal 1953 procurement program, the Air Force planned to order 39 different aircraft types, the Navy, 27. These numbers would be pared sharply if the staff study recommendations were put into effect. Just how much they would be pared is not yet known, for the study is not complete, but in the fighter and bomber category alone 10 models would go out of the picture.

Here is a round-up of how some of the major combat type models would be affected if the staff study should become an approved program:

### AIR FORCE

Types Now In Program	Suggested Program	Would Be Eliminated
North American F-86D	F-86D	F-94C
Lockheed F-94C	F-84F	F-89
Northrop F-89	F-86F	F-84G
Republic F-84G	F-100 <sup>1</sup>	B-57A
Republic F-84F	F-101 <sup>1</sup>	B-36
North American F-86F	F-102 <sup>1</sup>	YB-60 (Convair) <sup>2</sup>
North American F-100	B-47	
McDonnell F-101	B-52	
Convair F-102	B-66 (Douglas)	
Convair B-36		
Boeing B-47		
Boeing B-52		
Martin B-57A		

<sup>1</sup> These models would "phase-in" later and replace some of the earlier types, like the F-86F and F-86D.

<sup>2</sup> The YB-60 is not now a production airplane, but has been under consideration for a production contract.

### NAVY

Grumman F9F	F2H	F9F
Grumman F10F	F3H	F10F
McDonnell F2H	F4D	F3D
McDonnell F3H	A2D	AD
Douglas F3D	A3D	
Douglas F4D		
Douglas AD		
Douglas A2D		
Douglas A3D		

From the above, which is only a partial run-down, it is obvious that there would be a tremendous impact on the industry. Northrop Aircraft, for instance, would lose its only production contract (the F-89 all-weather fighter). Grumman Aircraft Engineering Corp., long a

mainstay in Navy production, would go out of the fighter picture completely. The Glenn L. Martin Co., already wallowing in financial difficulties, would lose its major production (the B-57A, USAF version of the British Canberra light bomber).

One major question arises: if this suggested program were implemented, how would the production rate scheduled for the Air Force and Navy expansion be maintained? If, for instance, the Lockheed F-94C and the Northrop F-89 were wiped out of the program in order to concentrate on the North American F-86D in the all-weather fighter category, how would the USAF get an equivalent number of F-86D's to match the production loss in F-94C's and F-89's?

Would North American's production be increased at its own plant or would Lockheed and Northrop be forced to swallow the bitter pill of building a competitor's plane? If the former, it will cause hardship in some companies and will also have the effect of reversing the once loudly proclaimed policy of "broadening the base." If the latter, it will mean expensive re-tooling of some plants, increased cost per plane and a reduction of the number of planes which can be bought for the monies appropriated.

Opinions as to the value of the suggested program are varied. Some informed observers, conceding that perhaps there are too many plane types in production, nonetheless feel that reducing the number will result in a disruption of production.

Others feel that it is a good idea to reduce the number of types to lessen production problems later, even though it might disrupt production now. Still others feel that a reduction in the number of types is in order, but that it should start with the new models.

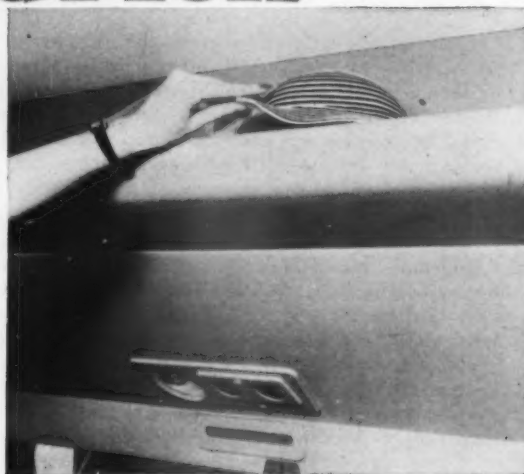
The staff study proposal will probably run into plenty of argument. Some military planners feel that there is a need for all, or nearly all, the types being ordered. The all-weather fighter category is a case in point. The F-86D is a single-seat plane, in which the pilot handles both the plane and the radar for interception; the two planes recommended for cancellation, the F-94C and F-89, are two-seat fighters with one man to concentrate solely on radar operation. The argument as to whether the second man is needed has been going on for some time, some planners feeling that the problems of high-speed interception will not permit the pilot to handle the radar efficiently. What if operational experience proves that they are right, after the two-seaters have been wiped out of the program?

Also, there is resentment on the part of some military men that the plane types to be built should be dictated by a civilian defense agency whose primary concern is simplification of production problems rather than building balanced air forces.

The first skirmish will start on August 7, when the Aircraft Production Board meets to hear the services' views on the staff studies. But a proposal as important as this one will not be settled at one board meeting; it will probably be rattling the windows of the Pentagon for some time to come.

JAMES J. HAGGERTY, JR.

# B.F. Goodrich



## The trim that gives costs a trimming

**K**EEPING UP the good looks of a plane's interior used to be a headache for airline maintenance people. Walls, headlinings, baggage racks and arm rests quickly became scuffed and smudged. Repeated cleanings wore out decorating materials too fast. And rugs took a beating from spilled foods and liquids, muddy shoes, scraping feet and the pounding of high heels.

Then B. F. Goodrich developed Avtrim, a flexible synthetic material that's practically immune to scuffs and scratches. It's so tough that it shows scarcely a sign of wear long after many

trim materials would have gone to pieces. It resists grease, oil, fire and all ordinary stains and chemicals. Spilled materials don't soak in, can be easily wiped up. Occasional cleaning with soap and water makes it sparkle like new. It fits skin-smooth over flat or curved contours, won't wrinkle with age.

Picture at the left shows Avtrim in use on walls, stair well lining and rail covering. At top right is Avtrim baggage rack, bottom right an Avtrim flight rug—Avtrim sheeting backed with fabric and sponge rubber.

Newest development is embossed

Avtrim—patterned, colored fabric covered with transparent finish. B. F. Goodrich can supply it in any pattern and color to match practically any decorative scheme.

Other B. F. Goodrich products for aviation now include tires, wheels and brakes; heated rubber; De-Icers; Pressure Sealing Zippers; inflatable seals; Plastilock adhesives; fuel cells, accessories. *The B. F. Goodrich Company, Aeronautical Division, Akron, Ohio.*

**B.F. Goodrich**  
FIRST IN RUBBER

AMERICAN AVIATION



CLARENCE N. SAYEN



DAVID L. BEHNCKE

## Sayen Versus Behncke: A Legal Tug of War

**Walk-outs threaten, dictatorship charged, new union set up as "legal" president returns to ALPA.**

By ROBERT M. LOEBELSON

**C**HICAGO—The Republicans and Democrats aren't the only ones who had difficulties trying to decide on a president here. The 7,500-member AFL-Air Line Pilots Association is on the verge of a split-up as a result of a Federal Court ruling that David L. Behncke, one of ALPA's founders and holder of union card No. 1, is still the "legal president" of the organization.

Representatives of pilots on at least three airlines, United, Chicago & Southern, and Northwest, have informed the National Mediation Board that they are dissatisfied with Behncke as president, adding that work stoppages will result. In addition, ALPA's master chairmen on Eastern, Trans World Airlines, and Pan American

have written Behncke that unless he steps down, "100%" of the pilots on those airlines will secede from the union.

Pilots for most of the major airlines have already set up the nucleus of the new union, calling it the Air Transport Pilots Association. A membership drive is to be launched very quickly and Eastern Air Lines pilots are expected to be the first to ask that ATPA represent them.

The dispute goes back to July 16, 1951, when ALPA's executive board and board of directors amended the union's constitution and by-laws to provide for the recall from office of the president and certain other officers by the affirmative vote of directors representing a majority of the members in good standing. Behncke refused to attend this meeting, claiming it was il-

legally called.

The directors proceeded to recall Behncke in accordance with the amended by-laws and elected Clarence N. Sayen as his successor, at the same time voting to provide Behncke with a lifetime payment of \$15,000 a year, the same salary he received as president.

Contending that he had been elected president for a two-year term beginning January 1, 1951, and that he could not be recalled by the executive board and directors, Behncke tried to hold on to his office, notifying banks which held ALPA funds not to honor checks unless he had signed them. This resulted in the filing of a suit by J. P. Talton and seven other members of the board in U. S. District Court seeking to restrain Behncke from interfering with ALPA and asking \$2 million in damages.

The Federal Court assigned the case to its Mastery in Chancery, Victor E. LaRue, who conducted hearings be-



tween July 30, 1951, and April 1, 1952. On May 20 he issued his report, finding:

- **The meeting and actions** of the executive board and board of directors on July 16, 1951, were legal and valid.

- **The union was entitled** to injunctive relief and Behncke should turn over property of the union to ALPA.

- **Sayen was to be considered** president for the current unexpired term.

LaRue's recommendations also said that ALPA's complaint that Behncke had been guilty of malfeasance and excessive expenditures in the construction of the union's headquarters building had not been sustained by the evidence. He urged that the \$2 million claim for damages be turned down.

On June 25, Federal Judge Walter J. LaBuy, after short hearings on the master's report, ruled, however, that:

- **Behncke's removal** "was not in accordance with the fundamental principles of due process and natural justice," requiring a notice, specification of charges, a hearing, and an opportunity to defend.

- **The board's action** removing Behncke was "illegal and void" and that he is the "lawful president" of ALPA.

#### LaBuy's Decision

On July 10, Judge LaBuy ordered ALPA to pay more than \$150,000 in costs, including \$62,675 for the attorneys for the ALPA directors and \$58,175 for Behncke's lawyers. Four days later he followed up with his decree, which:

- **Restored Behncke** to the job of ALPA president.

- **Voided the changes** made in the by-laws by the executive board.

- **Ordered Sayen** not to "hold himself out as president of ALPA."

- **Enjoined the plaintiffs** and others from interfering with Behncke's execution of the office of president, from holding out Sayen as president, and from using funds or assets to deprive Behncke of "supervision, custody or control thereof."

Since that decree, Talton and the others have asked the U. S. Circuit Court of Appeals here to review the case, meanwhile requesting a stay of Judge LaBuy's order.

The pilots reluctantly admit that their chances of obtaining a stay are mathematically small and the normal appeal procedure would take from six months to two years.

If the request for the stay of Judge LaBuy's order should be turned down, the pilots feel they have only one alternative—pulling out of ALPA. This could be done by asking the National Mediation Board to conduct new representation elections on each airline under

which the pilots and co-pilots would indicate their preference between ALPA and the new group.

Of course this step would be unnecessary if Behncke should decide to step down voluntarily, but he has told AMERICAN AVIATION he has no such plans. He feels that he is the victim of a plot by the "Sayen-Wood faction of ALPA" to discredit and oust him. Wood is Jerome E. Wood, first vice president under Sayen.

While claiming that a series of recall ballots circulated among the pilots was "illegal (the last vote showed 5,662—147 for Behncke's recall, according to the Sayen faction), irregular and outside the machinery of the union," Behncke is willing to admit that the pilots have "apparently" indicated a preference that he be retired as president. He says that is "because the pilots haven't been told the truth about me."

Behncke claims the pilots have been "misinformed" on: pilot agreements; mileage limitations; the ALPA headquarters building and its operating costs; ALPA's property and assets; the legal activities resulting from the ouster; "my intentions."

#### Battle Report

June 12, 1951—Behncke calls executive board meeting to discuss strike problems against United and American.

June 15—Executive board appoints a sub-committee to investigate ALPA's business affairs. Board votes a recess until the sub-committee report is ready but not later than August 1.

July 1—Behncke notified by executive board that the sub-committee report is ready but he refuses to call the board into session.

July 11—Executive board reconvenes with Behncke absent. After hearing about "shocking and damaging conditions," calls a board of directors meeting for July 16.

July 16—Directors, after Behncke fails to appear despite notice of the meeting, amend the by-laws and vote to recall Behncke. Clarence N. Sayen elected to replace him. Behncke refuses to recognize the actions, continuing to claim he is ALPA president.

July 23—Eight ALPA members of the executive board and board of directors file suit in U. S. District Court in Chicago seeking to restrain Behncke from interfering in ALPA affairs. On August 13 this suit is amended so that it is filed on behalf of all ALPA.

July 30—Hearings before Master in Chancery Victor E. LaRue begin. These hearings, petitions, answers and briefs continued to April 1, 1952.

On this last point, he adds, "My heart and soul are and always have been for the pilots." He said he is planning a series of concise reports containing "the truth backed up by facts and figures" and will make them available to all ALPA members soon. "When the pilots read the truth," he said, "they will vote to keep me in office at this fall's bi-ennial convention."

When he was asked if he felt that any members of the ALPA executive board favored him now, Behncke replied, "I can't comment on that until they know the full story."

But when Behncke was asked whether he would be willing to accept as president the man the pilots vote in at the convention [set for December 8] as the legal head of the organization (after he had conducted his truth-enlightenment campaign), he refused to give a definite answer.

Sayen, meanwhile, is taking little or no action in the maneuverings by the pilot group because of the court injunction. He did state, however, that he felt Behncke "would never represent airline pilots again," partly because of pilot dissatisfaction with the issues being thrown

May 20, 1952—LaRue's report to the Court says executive board's July 16, 1951, actions were legal and valid. Recommends that Behncke's ouster be upheld.

June 25—Federal Judge Walter J. LaBuy voids the executive board's actions, reinstalling Behncke as "legal president." Pilots discuss secession.

July 10—Judge LaBuy orders ALPA to pay more than \$150,000 in various costs, including those sustained by Behncke.

July 14—Court enjoins Sayen and others from interfering with Behncke's activities as president.

July 16—Northwest Airlines' ALPA master executive chairman notifies National Mediation Board that pilot strike is expected as a result of Behncke's reinstatement.

July 17—Pilot representatives on United Air Lines and Chicago & Southern Air Lines file similar notices.

July 18—Pilots on Eastern, TWA and PAA notify Behncke that unless he resigns they will secede. Pilot attorneys file for a stay of Judge LaBuy's order.

July 21—Behncke promises pilot contracts negotiated during Sayen's administration will remain in effect unless the pilots want them voided.

July 21—Air Transport Pilots Association formed; plan pilot recruitment.



into court and the resultant loss of more than \$150,000 to ALPA's treasury.

"In the long run," Sayen added, "Behncke will end up paying the court costs himself because the pilots won't renew that \$15,000-a-year pension."

The entire case, in Sayen's opinion, revolves around two basic points:

- Is ALPA to be a democratic union or a labor dictatorship?

- Do union members generally, and ALPA pilots specifically, have the right to chose their own officers, or is this a function of the courts?

"The pilots have said on at least three occasions," Sayen declared, "that they no longer want Behncke as president. Yet he is now sitting as president in the ALPA building by virtue of a court decision."

If no stay of Judge LaBuy's order is granted by the U. S. Circuit Court of Appeals, there is every likelihood that the secession which the pilots have been threatening ever since the decision was announced will become a reality.

In that case, more legal complications will ensue, because the pilots will want the assets and ALPA headquarters building—both of which Behncke will probably refuse to give up. But as one of the pilots put it, "The assets and building are only about \$1 million. That comes to less than \$150 a man. And we might even be willing to forget about them under those circumstances."

#### Resigned to Secession

Thus, Behncke and his supporters tenaciously hold onto the headquarters building and ALPA, while adherents of Sayen and Wood are virtually resigned to secession. Meanwhile many of the research and other projects which ALPA has been working on (propeller reversal, survival at sea, approach lighting, airport lighting, cockpit standardization, etc.) have been virtually halted because of the renewed dispute. The same situation holds true of research projects which ALPA has been carrying on in cooperation with the International Federation of Air Line Pilots.

Ironically, Sayen, who was removed from office as a result of Judge LaBuy's decree, remains as president of IFALPA—a job to which he was named as a result of his post in ALPA.

The decision is not far off. If the pilots do pull out of ALPA, as now seems likely, the airlines will be in for a number of problems themselves, especially in connection with the pilot representation elections. But the National Mediation Board has already indicated the pilots do have the right to request these elections. There may even be some work stoppages while the situation is being cleared up, with resulting losses of revenue to the airlines, who are in the unenviable role of innocent bystanders.



**Radar Super Connie,** Navy's new WV-2, is shown during flight testing of huge radomes—shark-like fin atop, and expanded "balloon" below. Installations are on "flying laboratory."

## KLM Orders Three More Lockheed Super Connies

KLM Royal Dutch Airlines has ordered three more Lockheed L-1049C Super Constellations to accommodate "the growing volume of emigrant traffic to Australia, New Zealand and Canada." Planes are to be delivered in 1954. Previously, KLM had ordered 10 of the planes for delivery early in 1953.

Including the Super Connie reorder, KLM now has 28 American aircraft on order or being delivered, more than any other carrier. Douglas has begun deliveries of the carrier's seven DC-6B's. In addition to these and the Super Constellations, the carrier expects two DC-6A Liftmasters and six Convair 340's.

The International Bank for Reconstruction and Development has granted KLM a \$7,000,000 loan for its re-equipment program.

## \$473 Million Backlog In Commerical Transports

The U. S. aircraft manufacturing industry has a commercial transport backlog of \$473,000,000, according to the Aircraft Industries Association's report appearing in the current *Planes*, its official publication. This represents a total of 456 commercial transports, 130 of which are slated for delivery in the

remainder of 1952, 202 more in 1953, and 124 in 1954. Of the total, 244 are four-engine and 212 are twin-engine types.

U. S. airlines are slated to get 285 of the new planes. Foreign lines will get 166, or 37% of the total.

## New Law Gives CAB Ticket Agent Control

Ticket agents and agencies for the first time are now under the regulatory control of the Civil Aeronautics Board insofar as their activities relate to the sale of commercial air transportation. Scope of CAB's authority to deal with agents was expanded last month when President Truman signed into law S.2690, a bill introduced in Congress at the request of the Board.

Generally, the change involves amendment of the Civil Aeronautics Act (Sections 411 and 902d) permitting CAB to prosecute "unscrupulous" agents engaged in selling air transportation. It is aimed largely at agents dealing with some non-scheduled lines whose activities, particularly abuses to the public, led to widespread publicity in the past few years.

New law permits imposition of fines ranging from \$100 to \$5,000 for ticket agencies guilty of certain unfair or deceptive practices, unfair methods of competition in air transportation, or certain rebate practices.



POROUS leading-edge wings mounted on test model are shown above in wind tunnel.

## Jet Flights To Push Boundary Layer Research

Flight tests scheduled with porous-wing F-86 as NACA wind tunnel tests demonstrate higher lift.

By JAMES J. HAGGERTY, JR.

**F**OR YEARS aeronautical scientists have been devoting considerable attention to control of the boundary layer, the thin layer of air immediately next to the airfoil of a plane, elimination or reduction of which can make a substantial contribution to the plane's performance.

Now, boundary layer research has progressed to the point where the National Advisory Committee for Aeronautics plans to test a control measure in a full-scale, high-performance military airplane. Plans were disclosed at the biennial inspection of NACA's Ames Aeronautical Laboratory at Moffett Field, Calif., July 14-15.

Briefly, the boundary layer is a source of drag. The layer itself may be a fraction of an inch or as much as a foot thick, depending upon the size and shape of the airfoil over which it is flowing. The air in this layer is turbulent, the turbulence being caused by the eddying of the air as it is forced to deviate from its normal smooth flow in order to "climb over" the curved surface of the airfoil.

The turbulence causes the drag, and a considerable amount of it. If the air were able to maintain its normal flow as it crossed the wing surface, all sorts of advantages would accrue from the de-

creased drag and increased lift—greater speed, lower fuel consumption, longer range, etc.

One of the most important advantages to be obtained from boundary layer control is reduction of landing speed, particularly significant in view of the high landing speeds of today's supersonic aircraft. Landing speeds are still on the rise, and unless they are curbed, they will result in prohibitive runway lengths. It is this particular phase of boundary layer control on which Ames Laboratory is now working and which will be actually flight tested in a military plane—the high-speed North American F-86 Sabre.

### Tested at Ames

The F-86 installation has already been tested in Ames' 40- by 80-foot wind tunnel and was demonstrated to attendees at the biennial inspection. It consists of a porous surface on the leading edge of the wing and flaps. A suction pump draws air through the porous material, smoothing the flow over the top of the wing and eliminating the slow-moving boundary sheet. The added lift thus obtained permits the plane to operate at a greater angle of attack in landings, providing a substantial reduction in landing speed.

NACA demonstrated the efficiency of the new system at Ames. A full-scale model with standard F-86 wings was

used for the test, and wind tunnel speeds corresponding to the normal landing-speed range were simulated. One wing of the model was fitted with the porous edges and the suction pump; the other was not. The wings were also fitted with small tufts to define the action of the air flow and the plane's angle of attack was gradually raised.

At a 14° angle the unequipped wing started to stall and at 18° it was almost completely stalled, but the wing equipped with boundary layer control still showed high lift.

NACA officials admitted that the suction pump system used is still too heavy for practical application to high-performance aircraft, but stated that when actual flight tests prove the worth of the system more conclusively, design work will be undertaken to reduce the weight penalty.

NACA also disclosed at the Ames inspection that it is doing considerable research on a new roadblock to very-high-speed flight—aerodynamic heating, the extreme temperatures developed by high-speed friction.

Aerodynamic heating is directly related to the boundary layer. At Mach 3 (about 2,000 miles per hour at altitude), the boundary layer may have a 600° Fahrenheit temperature; at Mach 5 it may reach 1,600° F. Skin friction between the boundary layer and the plane may account for as much as half a plane's drag at Mach 3, thereby considerably reducing operating range. It may also cause fuel loss through evaporation and boiling, and weakening of structural parts.

## If War Comes: SCAT; Joint Chiefs Adopt Plan

A plan for Security Control of Air Traffic (SCAT) during a military emergency has been adopted by the Joint Chiefs of Staff in collaboration with major civil aviation groups. Purpose of the plan is to enforce as little restriction on civil and non-tactical military flights as is consistent with national defense.

The commanding general of the Air Defense Command and the Civil Aeronautics Administrator will coordinate on the necessary promulgation of regulations and will be responsible for administering the SCAT plan.

Three warning signals have been devised to keep the military and civil defense authorities informed as to the status of the emergency:

- **Warning White**, signifying all clear, goes into effect simultaneously with the declaration of military emergency.

- **Warning Red** indicates that enemy aircraft have been spotted in the defense zone and attack is imminent. All non-essential, non-tactical aircraft are immediately grounded.

- **Warning Yellow** means that unidentified aircraft have entered the area and attack is possible. Warning Red procedures are followed.

Provisions have been made for keeping the duration of yellow and red warnings as brief as possible.

Air Division (Defense) Commanders, overseeing the defense sectors—geographical subdivisions of the Air Defense Force Regions—have final responsibility during attack or imminent attack in their individual sectors. It is up to them to notify both CAA and the Coast Guard of the current condition of alert.

Under certain conditions the AD(D)C may require a security clearance of aircraft before they leave the ground so that pilots can be informed of the current condition of alert.

## MATS Orders Ambulance Version of Convair 240

An unspecified number of C-131 aircraft have been ordered by the Military Air Transport Service for delivery early next year. Twin-engine medical air evacuation version of the Convair 240, the plane will carry 37 litter or 40 ambulatory patients and will release MATS C-47 and C-54M planes from domestic air evacuation to other air-lift missions in the U. S. and overseas.

Utilizing Pratt & Whitney R-2800-52W engines, the C-131 features aft-facing cabin seats which can be folded to a stowed position on the floor. Cabin



**First transcontinental flight** of Allison Turbo-Liner ended at its base at Weir Cook Municipal Airport, Indianapolis. A standard Convair Liner, the plane is powered by two Allison T38 turboprop engines rated at 2,750 hp with Aeroprop propellers. As a test bed, the plane will help determine solutions to the specialized operating conditions applying to turbine transports in military and commercial use.

## Lack of Bilateral Pact Delays EAL Route

The Mexican Government has issued a permit to Eastern Air Lines for operations between New Orleans and Mexico City, according to an announcement by EAL president E. V. Rickenbacker. But the continued absence of a bilateral air transport agreement between the U. S. and Mexico precludes inauguration of the service.

Rickenbacker said the permit is in line with the certificate granted to Eastern by the Civil Aeronautics Board in the 1946 Latin American Route Case. But, he added, operations cannot start until the U.S. grants reciprocal rights to a Mexican carrier.

This is substantially the position of CAB, the chairman of which, Donald W. Nyrop, negotiated for weeks in vain

last December with Mexican officials in hopes of breaking the stalemate which has existed since 1946. Nyrop's talks broke down when the two governments were unable to agree on Los Angeles-Mexico City operating rights. The Mexicans wanted an exclusive non-stop franchise for their carrier; the U.S. wanted reciprocal rights for carriers of both countries.

One Board official, who requested his name be withheld, said CAB takes "a dim view" of unilateral negotiations by American companies and recalled the Board's instructions to all present and prospective U. S. carriers to keep "hands off" while the U.S. endeavored to come to terms with the Mexican government on a bilateral agreement.

will be pressurized and air conditioned and will be painted white for added cabin cooling.

## TAL Buys Slick DC-6A

Slick Airways' Douglas DC-6A prototype was sold to Transocean Air Lines, it has been revealed and it is being used for irregular passenger flights between the mainland and Hawaii, having begun on July 26.

## Aerial Refueling Used

In-flight refueling has progressed from the experimental stage to actual operational use with the 10,895-mile flight from Turner AFB, Albany, Ga., to Yokota AFB, near Tokyo.

Fifty-nine F-84G Thunderjets of the AF's 31st Fighter Escort Wing were refueled in flight twice for a total of 118 refuelings without mishap. One plane crashed over Iwo Jima, but it was not a result of refueling trouble.





ONE of the lengthening string of Super Constellation models shown during take-off.

## Another Super Constellation Coming Up

**Gross take-off weight to hit 133,000 pounds, few structural changes for turboprops on Model 1049G.**

By FRED S. HUNTER

**L**OCKHEED Aircraft Corp. moves up to a maximum gross take-off weight of 133,000 pounds with its Model 1049G, latest in its series of Super Constellations powered by turbo-compound engines.

This model is a development of the basic 130,000-pound Model 1049B-55 (Model 1049C for passengers; R7V-1 for the Navy) and is designed for quick conversion to turboprop power when the latter becomes available for commercial operations. Landing weight is up to 110,000 pounds, increased from the 105,000 stipulated for the Model 1049C.

The Model 1049G is designed to permit conversion to turboprops without any modification in the basic structure beyond the incorporation of turboprop nacelles and the substitution of shortened wing tips. It includes a beefed-up wing and new landing gear.

Another new model in Lockheed's Super Constellation series is the 1049E. This has the beefed-up wing, but leaves the change in landing gear until such time as actual conversion to turboprops is projected.

Model 1249A-94 is Lockheed's designation for the cargo version of its projected Super Constellation, to be powered by Pratt & Whitney T-34 turboprop engines. Model 1249B is the

passenger version. With turboprops, maximum gross takeoff weight increases to 150,000 pounds. Landing weight remains at 110,000 pounds.

Lockheed had a proposed Model 1149, in which the use of Allison's T-38 turboprop engines was contemplated, but this project has now been side-tracked.

The first commercial compound-engined Super Constellation on the production line is a Model 1049C scheduled for delivery to KLM early in 1953. But the airlines will get an advanced look at the Wright TC18DA-1 engines in a transport in the first Navy R7V-1, which starts flying this month.

### Compound Engines

With a background of approximately two years of experience with the power plant in its P2V Neptune Navy patrol planes, Lockheed is confident that the 3,250 horsepower compound engine will prove out extremely well in airline operation, an outcome of the utmost importance to those carriers that have put their faith in the engine to carry them through the transition period pending the development of a U. S. jet transport.

Although Lockheed does have an original turboprop transport design in its XC-130 cargo job for the Air Force, the Model 1249 is representative of the Burbank manufacturer's theory that any

brand new jet transport should be pure jet and that application of the propeller to a turbine engine should be by way of advancing present planes.

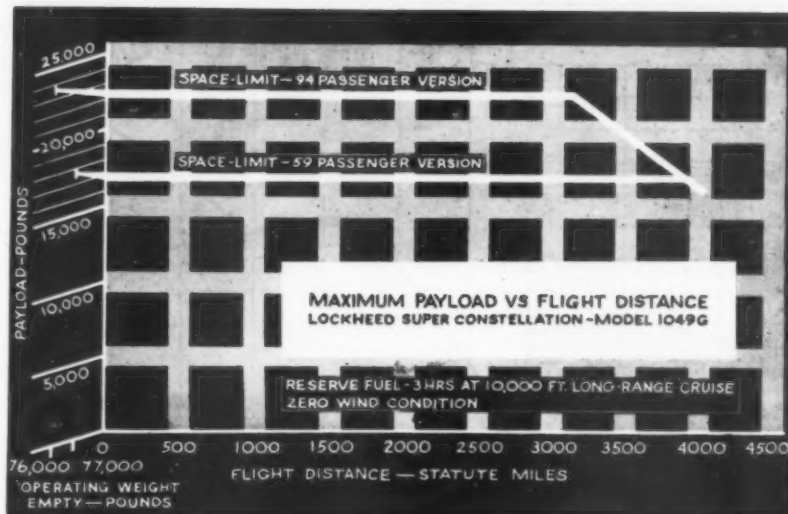
Even though the basic structure of the Model 1249B is identical to that of the Model 1049G except for nacelles and wing tips, conversion from compound to turboprop power will represent a substantial investment. Latest quoted P & W price tag on the T-34 engine is \$170,000 each, and the price of the Hamilton Standard propeller to fit the Super Constellation installation is reported at \$25,000.

A Model 1249B turboprop equipped for airline operation would cost a little more than \$2,500,000, as compared to approximately \$1,600,000 for a Model 1049G with the compound engines.

The later series of Super Constellations, starting with the Model 1049C, will have the new Henry Dreyfuss interiors designed for greater passenger appeal. Dreyfuss design is typically massive and strong, and the designer has succeeded in creating this impression in the interior styling of the newer types of Super Constellations with no actual penalty in weight. It is anticipated that the character of the Dreyfuss interiors will give passengers additional confidence in the structural integrity of the Super Constellations, and in turn have a direct bearing on passenger loads and revenues.

One feature of the interior arrangement is the allocation of undesirable





RELATION of payload to flight distance for the 1049G.

space to toilets and coat rooms. There are four toilets, two forward and two aft, the former being in the prop line and the latter in the tail where the circumference of the fuselage is receding.

Flush rails have been incorporated for quick installation and re-spacing or removal of passenger seats (four or five abreast). Passenger configurations include 59 for first class, and 82 or 94 for tourist.

#### Interior Details

The Dreyfuss interior separations run like this in the first-class configuration, forward to aft: (1) flight deck and crew quarters; (2) a 12-passenger compartment (forward of the prop line); (3) toilets and coat space; (4) main compartment, seating 32 passengers; (5) lounge area; (6) galley area (adjacent to main passenger entrance); (7) aft compartment for 11 passengers; (8) coat space; (9) toilets.

The lounge area, located midship between the main passenger compartment and the galley, can be changed to seven different arrangements, from deluxe lounge accommodations for eight persons to 10 tourist revenue-earning seats.

#### Profit Potential

Lockheed estimates that a fleet of three new-type Model 1049G's in overseas operations would have a profit potential in excess of \$1,000,000 per airplane annually based on the following calculations:

#### Conditions

Daily utilization ..... 8 hours  
Number of aircraft ..... 3  
Average block speed ....300 mph

#### Assumptions

Load factor (passenger and cargo) .....65%  
Mail load .....1,000 pounds  
Rates: Passenger—first class .....8.6c per mile  
tourist .....6.5c per mile  
Cargo .....40c per ton mile  
Mail .....\$1.40 per ton mile

#### First Class

Revenue .....\$11,865,000  
Direct cost ..... 3,200,000  
Indirect cost ..... 5,310,000  
Profit ..... 3,355,000

#### Tourist

Revenue .....\$13,575,000  
Direct cost ..... 3,240,000

Indirect cost ..... 7,070,000  
Profit ..... 3,265,000

Lockheed hints at even greater earning potentials when turboprop power becomes available. Lockheed has an order from the Navy for two turboprop Super Constellations (R7V-2's) for delivery next year.

## California Fare Battle Gaining Momentum

The Los Angeles-San Francisco coach fare battle between California Central Airlines, an intra-state carrier, and Western and United, broke out on several fronts last month.

With new Martin 2-0-2 aircraft now in service, Cal Central has upped its coach fare from \$11.70 to \$13.50 (see page 23). But Western and United are maintaining the lower fare. This situation produced these developments.

• **Cal Central filed a complaint** with CAB charging the lower fare observed by United and Western is "unreasonably low."

• **CAB instituted an investigation** of the United and Western fare.

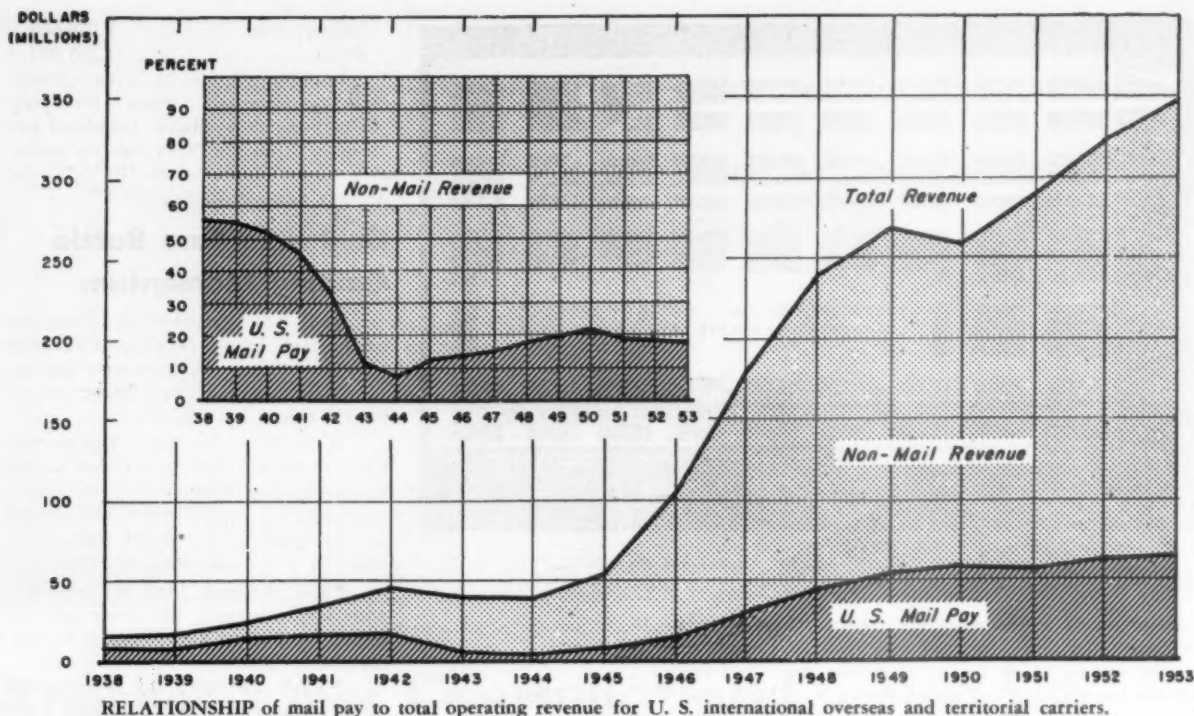
• **Western filed a complaint** with CAB charging Cal Central with engaging in transportation of interstate passengers without CAB authority.

• **Cal Central filed a complaint** with the California Public Utilities Commission against the lower fare of the scheduled lines.

• **CAB expanded its investigation** to include TWA's new \$11.70 coach fare between Los Angeles and San Francisco.



**Bell Model 47** series helicopters line up to await delivery to the company's plant at Saginaw, Texas, where they will be crated and shipped. They are assembled and flight-tested at the Bell Helicopter Division's new plant at Hurst, Texas.



## Internat'l Subsidies: A Drop in the Bucket?

Only about 15% of total operating revenue for U.S. international carriers is subsidy, CAB report reveals.

By WILLIAM V. HENZEY

ONLY SOME 15% of the total operating revenues of U. S. international carriers is subsidy, and total mail pay, including both subsidy and service rates, adds up to less than 20% of the carriers' income. The figures were revealed late last month as the Civil Aeronautics Board wound up the second major phase of its subsidy separation campaign with a report on the international carriers.

First phase of the Board's program was a similar report on domestic carriers released last September. With the cards now on the table for all U. S. certificated lines, the next step, already underway, is a detailed probing with an eye on "refinement" of the individual factors which led to establishment of the current rates. This will take a year to complete, under the present schedule.

The international report, naming service rates ranging from 45c to \$2.50 per ton-mile, shows that \$45.9 million will be paid to U. S. international carriers in subsidy during fiscal year 1953, just begun. This will be 70.4% of the total \$65,326,000 mail pay estimated to be received by the lines during the year and will be approximately \$22 million more subsidy than expected to be paid

domestic carriers during the same period.

CAB estimated that subsidy support to the international lines "will tend to increase" for the next several years in contrast to an anticipated decline in domestic subsidy payments. Reasons for this are numerous, the more important ones being:

- Competition by foreign flag carriers is constantly increasing.
- Increase in operations by U. S. international carriers has been accompanied generally by a proportionate increase in operating costs.

### Completely Dependent

- Some areas, such as the Territory of Alaska, are almost completely dependent upon air transportation and without subsidy support to airlines transportation in some cases would virtually cease.
- National interests, including both the foreign commerce and the national defense of the U. S., result in the operation of some routes for other than purely economic considerations.

• Need for replacement of existing aircraft in many cases with those having the latest technological improvements to meet the increasing impact of foreign competition.

Seven general classifications of carriers have been set up in the new administrative report, determined chiefly by geographic location. These classes and the service rates for each group are:

A. **Trans-Atlantic Operations** — Trans World Airlines and Pan American World Airways—Atlantic Division. 85c per mail ton-mile.

B. **Latin American Operations**—(1) Pan American—Latin American Division. 59c per mail ton-mile. (2) Braniff, Chicago & Southern, and Panagra. 88c per mail ton-mile.

C. **Trans-Pacific Operations** — Northwest Airlines and Pan American-Pacific Division. 67c per mail ton-mile.

D. **Hawaiian Operations** — Hawaiian Airlines and Trans-Pacific Airlines. 81c per mail ton-mile.

E. **States-Alaska Operations** — Alaska Airlines, Pacific Northern, and Pan American-Alaskan Division. 47c per mail ton-mile.

F. **Intra-Alaska Operations** — (1) Alaska Airlines, Pacific Northern, Northern Consolidated and Wien-Alaska. \$1.29 per mail ton-mile. (2) Alaska Coastal, Byers Airways, Cordova, Ellis, and Reeve Aleutian. \$2.50 per mail ton-mile.

G. **"Stub-End" Operations of Domestic Carriers**: (1) American, Eastern, and United. 45c per mail ton-mile. (2) National. 53c per mail ton-mile. (3) Colonial. 75c per mail ton-mile.

In providing the new rates, CAB

used the same techniques of separation employed in the domestic field last year. All rates stem from a cost-per-revenue-ton-mile figure of 34.20 cents, average for the "Big Four." For those four lines, CAB determined 45c to be an adequate service rate for carrying the mail.

Costs for all other carriers were then compared with the "Big Four" cost figure and the eventual service rate for each carrier bore the same relationship to the 45c rate of the "Big Four" as the cost figures did to each other.

#### Average Cost

Applied internationally in the trans-Atlantic field, average cost for Pan American and TWA was found by CAB to be 64.23 cents per revenue ton-mile. This is 187.81 per cent of the "Big Four" average cost of 34.20. The 187.81 per cent was then applied to the "Big Four" service rate of 45c, producing a service rate of 85c for Pan Am and TWA in the trans-Atlantic service.

Significantly, although total international subsidy payments of all U. S. carriers will run 70% of total mail payments in fiscal 1953, subsidy to Pan Am and TWA in the trans-Atlantic field, the most competitive foreign market in the world, subsidy will make up less than 60% of total mail pay and 11% of total revenues of the two U. S. carriers.

CAB's administrative separation reports are not designed as a means of establishing mail pay for U. S. airlines. Major purpose is to permit the public and Federal Government to identify readily how much the government is spending for mail carriage and how much for subsidy.

#### Advantages

Advantages stemming from the international report, for example, are:

- The President and Congress are provided with information which will permit a review of the amounts being spent for international subsidies.

- CAB is provided with information which will assist it in arriving at policy decisions affecting the development of the international air transport industry.

- Uncertainty is eliminated with respect to that portion of the Post Office Department deficit which is directly raceable to subsidies to the international air transport industry.

Over the big hurdle with completion of the separation reports, CAB immediately embarked on a study to develop a so-called "multi-element" service-mail-rate structure to be used in mail-rate-making procedures for U. S. certificated air carriers. New structure, CAB says, will produce the same effective mail rate for identical mail services

between two points without regard to the individual carrier operating the service.

Need for this stems largely from situations in the domestic field where so-called "Group II" or 53c-rate carriers compete over segments for mail tonnage with the Group I (Big Four) carriers, which are paid 45c in service pay. Typical example is between New York and Miami where National and Eastern, both non-subsidy carriers, compete for mail traffic, with National on a 53c rate and Eastern on a 45c rate.

In establishing the study to develop a multi-element mail-rate structure, CAB said it will be designed to reflect the cost characteristics relating to the actual mail service performed and will not apply in determining any subsidy paid to any carrier. It will not, the Board pointed out, prevent any individual carriers from requesting subsidy assistance in accordance with provisions of the Act.

The new program is designed for completion by June 30, 1953. Widest possible views will be solicited, CAB said, with invitations circulated to all members of the U. S. airline industry and the Post Office Department. Program will be geared to any appropriate legislation enacted by the Congress.

## Colonial Votes 'Yes' To EAL Merger Bid

Colonial Airlines, in the midst of a CAB investigation aimed at merging it with National Airlines, has accepted a merger proposal from Eastern Air Lines worth about \$8.5 million to Colonial stockholders. The Eastern offer was one of three bids submitted in response to Colonial's solicitation of ten U. S. airlines for merger offers.

The Eastern-Colonial pact, now an agreement among directors of the companies, is subject to approval of the Civil Aeronautics Board and stockholders of both companies. With little stockholder opposition seen at this time, CAB approval looms as the major factor in implementing the deal, particularly since the Board had instituted the National-Colonial merger investigation on its own initiative.

Acceptance of the Eastern offer culminated a turbulent series of merger negotiations for Colonial. Earlier this year, Colonial's management agreed to merge with National, only to have an opposition stockholders committee upset the deal. Subsequently, CAB instituted its investigation for a Colonial-National merger.

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## JET CENTER, U.S.A.

Nearly four million square feet of floor space, employment approaching 8000, and some of the most modern and complete jet-producing facilities in the world make up "Jet Center, U.S.A.," the new General Electric plant at Lockland, Ohio. Dedicated on the tenth anniversary of the first American jet engine, this new jet giant will be a tremendous factor in the future of American aviation.

Lockland provides for rapid expansion to meet national emergencies as well as a foundation for peace time production. While its recent rapid growth has been due mainly to the demands of increased aircraft production, Lockland will remain to spearhead the progress of aviation and to bulwark national security.

Features of the new plant are a new parts production building and a new engineering and administration

building, both recently completed, and a new Components Development Center now under construction. One large building, previously used for assembly of production engines, is now devoted to development work to bridge the difficult gap between experiment and production. Two huge new test cells, with a common control room, have been built especially large to accommodate engines of extremely high thrust ratings.

During the fastest ten years in history, jet engines designed and developed by General Electric have powered more planes, set more records, and flown more hours than all other U.S. jets combined. Now, with this experience, a team of skilled workers and the new facilities available at Lockland, General Electric works for the future.

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CALIFORNIA CENTRAL's Martin 2-0-2's, known as Martinliners, sport a new paint job.

## Inside Story of California Central Airways

**Intrastate carrier has 69.5¢ direct operating cost on 2-0-2's; utilization running to 6.7 hours a day.**

A GOOD DEAL of attention has focused on California Central Airways since it swapped its DC-3 and DC-4 equipment to Northwest Airlines for five Martin 2-0-2's.

At the time the deal was made there were practically no predictions of success for the venture. "Northwest's operating troubles are being moved to California," was typical of the viewpoint around Lockheed Air Terminal.

It is a source of keen satisfaction to Colonel C. C. Sherman, president of CCA, and his two principal operating aids, Harry Conover, assistant operations director, and Cliff Stout, chief pilot, that they have confounded the skeptics by achieving a good record of keeping schedule with the equipment.

### Fare Boost

Rising costs, common to all airlines, not higher operating costs for its Martin 2-0-2 equipment, brought on California Central Airways' recent boost in the fare between Los Angeles and San Francisco from \$11.70 to \$13.50 plus tax.

Colonel Sherman, said the scheduled intrastate carrier was more than satisfied with its Martin bargain.

"You can't blame it on the Martin's because we pay pilots \$275 per month more than formerly," he has said.

Introductory costs imposed by the changeover from the former 28- and

30-passenger DC-3 equipment were substantial for an airline whose average ticket has been only eight dollars. Col. Sherman estimates these non-recurring costs to date at \$145,000.

More non-recurring costs are ahead as Col. Sherman still is spending money improving the 2-0-2's. CCA did not cancel out a single schedule between Los Angeles and San Francisco for weather last winter, and Col. Sherman wants to duplicate the record next winter.

CCA's latest figure on direct operating costs of its Martinliners, as it prefers to call the 2-0-2's, is 69.5¢. This includes flight operations, direct maintenance, depreciation of flight equipment (on a five-year basis) and certain ground and indirect maintenance costs not normally included in directs by other carriers.

Adding the expense of traffic and sales, advertising, accounting, administration, etc., brings CCA's total cost of operations up to \$1.06 per mile, a figure which entitles it to classification as a low-cost operator.

The Martins have been of material assistance to CCA in overcoming a problem typical of airlines having low route mileage, that of utilization of equipment. Utilization currently is running 6.7 hours per day, as compared to 5.17 hours per day with the DC-3 equipment a year ago.

Most of this increase is obtained through greater flexibility of the new equipment on week-ends, when the coach traffic booms into as many extra sections as there is equipment available. Such innovations as skip-stopping Los Angeles or Burbank and non-stopping from San Francisco to San Diego also help.

### No Place to Go

CCA would like to stretch out its route mileage to bring its utilization up to a more economical point, but it has no place to go within the borders of California. It once tried an extension from San Francisco to Sacramento, a 75-mile segment that would have fitted in just about right, but it produced far too little revenue. Col. Sherman sadly wrote it off as a \$30,000 experiment. Edwards Air Force Base, the big desert test center, also came a revenue cropper.

No operator is more conscious of station costs than Col. Sherman. Because of the intense competition from United Air Lines and Western Air Lines, both of which are still maintaining the lower fare of \$11.70 plus tax for their DC-4 high-density coach schedules, CCA has had to add Los Angeles as a co-terminal to Burbank, and to supply service both to San Francisco and Oakland on the north end of the line.

This distresses Col. Sherman no end. He considers it pure waste. Landing fees alone represent an extra \$14 per schedule, \$8 at Los Angeles, \$6 at Oakland. On five schedules a day, that's \$25,000 a year.



CCA'S PRESIDENT, Col. C. C. Sherman sits in the pilot seat of new Martinliner with Capt. Harry Conover, assistant director of operations.

The CCA president nourishes a pet idea designed to cut station service costs on a high-density route like Los Angeles-San Francisco. He would like to eliminate all reservations, sell tokens in the place of tickets, install turnstiles at the loading gates, put in schedules at half-hour intervals, and let passengers board planes simply by dropping tokens in the turnstiles. Passengers shut out from one plane would be first in line for the next.

#### Interchange Tokens

The plan couldn't miss, Col. Sherman insists, if UAL and WAL would go along with him, set up a rotation of schedules and interchange tokens. But irrespective of the reaction of UAL and WAL to his overtures, he predicts CCA will be able to adopt the token idea within two years.

Full impact of the Martin equipment traffic-wise came in May, when CCA ran up a new record of 18,902 passengers as compared to 10,449 passengers in the same month in 1951 when DC-3 equipment was being operated.

For the first six months of 1952, CCA carried a total of 93,864 passengers as against 61,283 passengers in the first six months of 1951, a gain of 32,581 passengers.

Current load factors on CCA's three segments as compared to a year ago are as follows:

	1951 (28-pass. DC-3's)	1952 (44-pass. 20-2's)
Los Angeles-San Francisco	74.6%	82.7%

San Diego-Burbank ....	40.6%	51.9%
Burbank-Inyokern ....	30.9%	31.2%

The table makes it obvious that CCA's profit potential lies in the Los Angeles-San Francisco sector. San Diego-Burbank is demonstrating healthy growth and CCA anticipates load factors will exceed 60% before the summer is over. But CCA needs the San Diego route mileage anyway. And, of course, San Diego makes a contribution to the 82.7% load factor the carrier is enjoying between Los Angeles and San Francisco.

The Inyokern route is a service for the Navy ordnance test station located there. CCA is guaranteed 40 passengers a day on the route. Since it has been operating the Inyokern schedules, CCA also has carried more than 200,000 pounds of Navy mail and cargo without charge to and from the desert test station.

The CCA operation of the 2-0-2's is conservative. Cruise with the P & W R-2800-CA18 engines is at 1,080 hp and 2,200 rpm above 7,000 feet, and at 1,900 rpm at 7,000 feet or below. Reverse pitch has been made inoperative and carburetor modifications have been made for a saving of an estimated 8% in fuel.

CCA was the first carrier to make use of the new omni airway in California, and installation of an additional Collins omni receiver and radio magnetic indicator is now being engineered to provide dual equipment in the aircraft.

Another current engineering project is the installation of aileron boost to pro-

vide more control at low air speeds, although CCA pilots now bring the 2-0-2's over the fence at the low speed of 105-110 mph and retain entirely satisfactory stability.

Col. Sherman has another idea which he greatly fancies. This is the addition of jet pods to his Martinliners after the fashion of the jets on Convair's B-36. The wing, he figures, is strong enough to take them with a little beefing.

#### Jet Pods

The CCA president's idea in adding the jet pods would be to take off and land with the R-2800's, but at cruising level feather the piston engines and turn on the jets.

The result, Col. Sherman says, would be faster, smoother flights for the passengers and more economical maintenance for the airline, the latter being gained because the piston engines would be shut off two thirds of the time.

The Colonel thinks his idea would be good in more ways than one, because he suspects it will take a little time for the average passenger to get accustomed to jets, whereas he would not hesitate to board a plane also having reciprocating engines. He also feels it would solve the problem for air traffic control, which isn't now set up to handle jet aircraft.

## AF Places Order for New 'Copter Autopilot

Minneapolis - Honeywell Regulator Company has entered the helicopter automatic pilot field, having received a \$4,476,795 order for its newly-developed automatic pilot for helicopters, earmarked by the Air Force for initial use in the Piasecki H-21.

Developed by the company's aeronautical division with the cooperation of the USAF and Piasecki Helicopter Corporation, the new helicopter autopilot permits accurate hovering control and provides the craft with increased stability. The human pilot's job is greatly simplified, since the device frees him from much of the effort and concentration previously required.

The autopilot is the result of two and a half years of research, engineering, and flight testing.

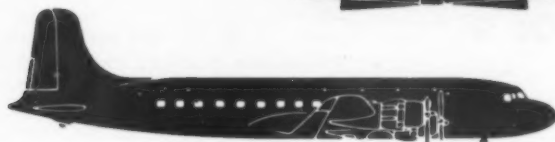
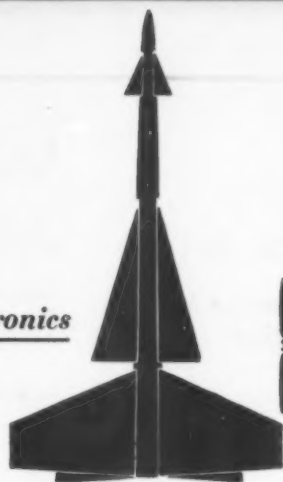
## Heliport Noise Test

London's Thames-side heliport on the Festival of Britain's South Bank site will be tested for noise volume by British European Airways. A Bristol 171 helicopter will be used for the test. Previous trials proved the site to be suitable operationally.

BEA is waiting for a twin-engine helicopter before it begins serving the British capital.



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## —new Douglas Aircraft Computers

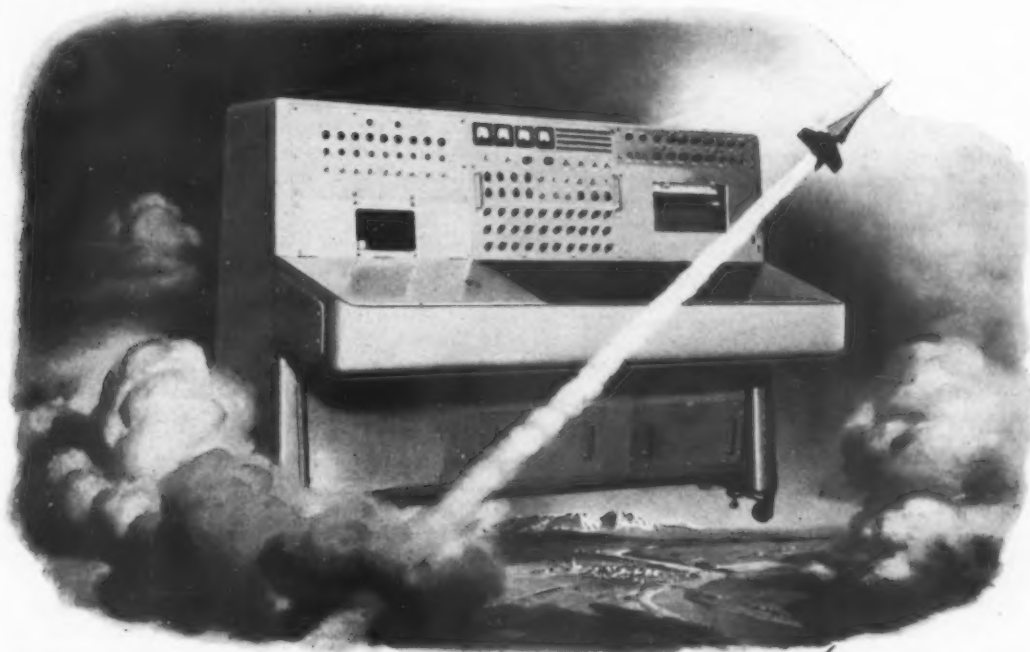
So complex have modern planes become that thousands of hours go into their design. One mathematical problem might take weeks to solve.

To shorten these steps, Douglas has developed automatic computers, analyzers, and measuring devices which

work out problems *faster than an engineer can write them down*—codagraphs, iconologs, digital converters. Some take data transmitted electronically, while a plane is in flight, and solve it before the pilot lands—others work with guided missiles. But *all* are designed to simplify

engineering problems, and can be used in any industry.

Development of these electronic devices is further proof of Douglas leadership, helps Douglas produce planes in quantity—to fly further and faster with a bigger payload.



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# Interview

with

**GEORGE W. JALONICK, III**

**President, Aviation Distributors & Manufacturers Association**

★

## The Distributor's Place in the Industry

★ ★ ★

**George W. Jalonick, III:** President of the Aviation Distributors & Manufacturers Association, Jalonick, 39, entered the industry in 1940 by gaining controlling interest in Southwest Airmotive Corporation together with Winston C. Castleberry and Harlan Ray. He was concerned with the overall management of the company when SAC was an Air Force contractor in World War II.

Later he was able to form a separate division of the company for distributorship activities, organized as the SAC Sales Department. Jalonick spent a great deal of his time in the north and east, selling manufacturers on Southwest Airmotive as their distributor.

His success in this is best told by the blue-ribbon list of distributorships, including Pratt & Whitney, Hamilton Standard, Scintilla, Eclipse Pioneer, Bendix Products, Goodrich, Aircraft Radio Corporation, and Radio Corporation of America. As vice president in charge of sales, he has conducted a long and successful campaign to get the airlines to buy from distributors rather than directly from the manufacturers.

Jalonick worked diligently in ADMA in its early days, and served as director and vice president before being elected president.

A prominent citizen in his native Dallas, he is ex-chairman of Dallas Chamber of Commerce Aviation Committee; a member of the Greater Dallas Planning Council, Texas State Aviation Advisory Council, Texas Aviation Legislative Committee, State Aviation Association, Aviation Trades Association, Texas Police Association, Dallas Crime Commission, and the Greater Dallas Planning Council. The holder of a private pilot's license, he is also active in the Texas Private Flyers Association. In addition, he finds time to serve as the chief of the 12-county Civil Aviation Defense Program.

**Q.** How many members does the Aviation Distributors and Manufacturers Association have?

**A.** Seventy-two.

**Q.** How are these divided between manufacturers and distributors?

**A.** There are 36 distributor members and 36 manufacturer members. There is no particular significance to this "equal distribution"—that just happens to be the way it is at the present time.

**Q.** What percentage of the eligible aircraft manufacturers and distributors is represented in ADMA?

**A.** I can't answer this question, because I don't know how many companies there are in the country engaged in manufacturing aircraft components. Also, there are many concerns which represent themselves as distributors when, in reality, they are *not*, and still others whose distributorship functions are so limited or vague that they fail to live up to the definition of the true distributor as ADMA defines the term.

We feel, however, that we have among our members *most* of the leading makers of aircraft parts and accessories and a *great majority* of the leading distributors representing them in the field.

**Q.** What is the basis of ADMA membership fees?

**A.** Both manufacturers and distributors pay an entrance fee of \$50.

Manufacturers pay annual dues of \$250.

Annual dues for distributors are scaled like this: \$20 per month for those with annual sales of \$200,000 or less; \$25 on sales of from \$200,000 to \$500,000, and \$30 per month for those over \$500,000.

**Q.** What concrete efforts are being made to expand ADMA to a position of greater service and influence?

**A.** As with any association, ADMA is judged largely by the special services and opportunities it affords its members which they can't get anywhere else, and by the contributions it makes to the industry as a whole. Never before in aviation has there been an organization designed expressly for the betterment of parts and accessory distribution, and for bringing the manufacturer together with the distributor for a frank and open discussion of mutual problems.

Certainly, there's strength in numbers—providing the numbers are good ones. We have a highly selective membership program underway, and are anxious to accept new members when they meet our requirements.

Currently, we are considering the adoption of a Code of Ethics which we feel will be of value to all concerned.

**Q.** Would you define the difference between your organization and the Aircraft Industries Association.

**A.** AIA is for manufacturers only, including airframe makers. ADMA membership is limited to the manufacturers of aircraft components and to the distributors of components, parts, and accessories. You might say that, instead of duplicating AIA, we take up where AIA leaves off. Some of our manufacturer-members are AIA members also (principally the makers of engines, instruments, and engine accessories).

**Q.** What services do you offer members?

**A.** As far as I'm concerned—and I'm sure this is true of most ADMA members—the association's greatest service is providing a medium whereby manufacturers and distributors may get better acquainted, swap ideas and criticisms, and sit around a table working out better ways to do business with one another.



## "Surplus . . . there's a gradual whittling down . . ."

In addition, though, we offer these services: collection and analysis of pertinent industry statistics; promotion of friendly relations with other phases of the industry; liaison with government agencies in Washington, D. C.; a "lookout" for, and interpretation of, legislation affecting us; recommendations to help individual members improve their business procedures; assistance in the member's public relations and publicity problems; and many other such aids to successful enterprise.

Most of these services are directed by the association's secretarial office, Fernley and Fernley, in Philadelphia, Pa.

**Q.** It would appear that the activities of distributors and parts manufacturers are at odds—i.e., surplus distributors undoubtedly have cut sharply into the manufacturer's market. Would you comment on this?

**A.** There are, and always will be, variances of one kind or another. I think this is a normal and healthy situation which, if it does nothing else, keeps us all on our toes.

### Discounts Controversial

As an example, discounts are the most controversial of all ADMA topics. However, this isn't a question ADMA as an association can solve, because no two manufacturers and distributors operate exactly alike; their costs of doing business vary. Solving this particular problem is an individual matter—ADMA provides a meeting place and a means by which these individual solutions can be reached.

Surplus undoubtedly has hurt manufacturer and distributor alike, but we have seen a gradual whittling down of it and a resultant upswing in the distributor's sale of new merchandise. It hasn't disappeared—it's still a bugaboo—but it's fading away.

**Q.** At one time it appeared that the surplus distributors represented a goodly portion of ADMA's membership. Is this true?

**A.** Yes, at one time early in our history, this was true. However, under ADMA's present membership requirements companies dealing primarily in surplus aren't eligible.

Practically all of these early surplus-dealer members have dropped out. They found ADMA wasn't worthwhile for them, since our discussions and forums centered about the real distributor of new equipment. I think their original intent when they got into ADMA was to try to make distributorship deals with the manufacturers to perpetuate themselves when surplus finally disappears completely. This didn't happen, so they resigned.

**Q.** What is being done to control membership?

**A.** This is best answered by telling you the route an application follows before getting a final okay.

We have what I feel to be the strongest ADMA membership committee in our history, comprised of Paul A. Kennedy, Southwest Airmotive, chairman, and, as members, C. A. Carlsen, Air Associates; Walter B. Powell, McCauley Industrial Corp.; Arthur C. Harvey, Air Parts, Inc.; W. L. Carolla, R. M. Hollingshead Corp.; Harry L. Mitchell, General Aircraft Supply Corp.

This committee has completely revised our admittance system. Under this system, the applicant fills out an application form and a separate, detailed data blank. Three members must endorse the application. The data blank calls for a listing of manufacturers represented, with the dollar volume of purchases from each during the past year. These

facts are verified by the manufacturers individually, with a statement whether or not the applicant is a bona fide distributor.

The application is screened by the executive secretary and then by the membership committee chairman. Each committeeman gets a copy, and then does a screening job of his own, returning his comments to the chairman.

If approval isn't unanimous, objections are referred to the executive secretary and to membership committeemen for further consideration. If approval is unanimous, the executive secretary sends a bulletin to ADMA's entire membership stating that the application is in hand and that comments are welcomed.

No further action is taken until the membership committee meets on the day preceding the opening either of the Mid-Year Meeting or the Annual Convention. Committee reports on applications then are submitted to the ADMA board of directors where a final decision is reached.

No, it isn't easy to get in ADMA; but, by the same token, it isn't difficult, providing the applicant conducts his business well and is in good standing in his industry and community.

**Q.** What is the significance of the change in membership approval procedures?

**A.** In the past, it was possible for a single member to block the approval of an applicant—or to "ramrod" one through, if he felt so inclined. Now, the entire membership has a voice in the decision.

**Q.** What was the major subject of your recent meeting at Mackinac Island?

**A.** Business ethics were the major topic for discussion. Earle Scott, president of Scott Aviation, Lancaster, N. Y., led an ethics forum in his capacity as chairman of our merchandising committee. The question of eliminating unethical competitive practices took up most of the time. Another important topic was the manufacturer-distributor relationship as it affects sales policies, warranties, and gross margins.

### Sales: Over \$35 Million

**Q.** What percentage of aircraft parts purchases are made through distributors at this time?

**A.** I can't give you an industry-wide percentage. However, in January of 1952, I requested our 36 ADMA distributor members to give me their sales volumes for the 1951 calendar year, excluding the sale of labor and sales to the military. Twenty-seven reported a total of \$24,574,197. Of the nine not reporting, three were among our largest distributors.

My guess is that, had all 36 answered, the total would have been between \$35,000,000 and \$40,000,000. Remember, too, these figures represent wholesale—not retail—prices.

**Q.** Has there been any trend in this field? How do present purchases compare with other postwar years?

**A.** There is an upward trend of sales by the legitimate distributors of new parts and accessories, due to (1) the decline in war surplus, and (2) the distributor's "wising up" to the necessity of opening new markets for his sales.

The distributor once concentrated primarily on fixed base operators, but now he also sells the airlines and original equipment manufacturers. There was a sharp decline in sales to fixed base operators, particularly in our part of the country, because of the drop in GI flight training.

**Q.** Would you list the nature of ADMA's market

## "...airlines have reduced certain inventories 50%"

in the order of relative volume of business provided?

A. I'm not up to date on other distributors' primary markets, but, in the case of Southwest Airmotive, our largest sales are to the airlines, followed by those to large overhaul and repair shops, to the fixed base operators, and, finally, to the military.

**Q. Is this directly related to the advantages which might be expected to accrue to each of these groups?**

A. We feel that the volume of our present sales to the airlines is a pretty accurate barometer of the benefits which any distributor might expect to enjoy if he performs a full and honest distributorship function.

In handling certain lines of merchandise, the distributor, selling to an airline in his territory, can more than prove his worth by providing the airline with an all-important "second source," ready to provide parts in emergencies and regularly in accordance with a well-studied purchase and delivery plan.

The distributor is a "coordinator" of airline purchase orders which formerly went to many different sources. By handling the airline inventory, the distributor saves the airline invested money, insurance, warehouse and shelf space, paperwork, etc. He takes the beating—if and when it comes—on obsolescence, and in many cases pays freight and follow-up expenses.

The distributor helps the airline buy effectively and keeps the manufacturer posted on upcoming problems and requirements. Instead of weakening the airline-factory relationship, he vastly strengthens it. The distributor definitely does not pose as a "technical expert"; instead, he makes certain that factory technical assistance is on the spot when needed.

Similar benefits apply with almost equal vigor to other segments of the industry with whom we deal.

**Q. What do you consider the strongest argument against dealing through distributors?**

A. In the past, the strongest arguments were posed by a few distributors who entered airline relationships poorly equipped for the job and with uncertain intentions of handling it well. They were mere "middlemen" with very little to offer. Their customers soured on them in a hurry.

Fortunately, it appears that this kind of distributor's day has ended. We have stronger distributors and have succeeded in proving to the airlines that we can serve them both efficiently and economically.

### Direct Pipeline

Another "anti" argument has been that, by dealing with a distributor, the airline loses its direct "pipeline" to the plant—and vice versa. This has been disproved by our willingness and ability to strengthen this pipeline, rather than to weaken it.

One airline told us recently that, since dealing with us, it has seen more factory representatives on the spot than ever before.

**Q. Does membership in ADMA enhance a distributor's opportunity of selling to manufacturer members of ADMA?**

A. I would say "Yes"—providing the distributor enjoyed a discount sufficiently large to make the transaction attractive to his manufacturer-customer.

**Q. Among the manufacturers, which ones have been most active in promoting the role of the distributor? What is the trend?**

A. In entering ADMA, all of our manufacturer-members evidenced an aggressive intent to work better in harness with their distributors. This sort of teamwork definitely constitutes a "trend."

Speaking for Southwest Airmotive only, we have found a large number of manufacturers ready, willing, and able to help us—providing we apprise them of our problems and needs. As an example, we have enjoyed especially fine relationships with the various members of the Bendix family—Scintilla, Eclipse-Pioneer, and Bendix Products.

**Q. ADMA members apparently had a difficult time selling the airlines on the advantages of buying through distributors. How successful has this campaign been?**

A. Considering its recent beginning, this "campaign," has been highly successful—simply because we have proved that, with certain lines, we can offer the airlines definite extra benefits. A number of the distributors are doing quite well in this direction. Few of these arrangements resulted from the airlines coming to us—we're still taking most of the initiative.

### Specific Examples

**Q. Would you provide some specific examples of distributor activity in enabling an operator to maintain more sensible inventories?**

A. Several airlines have reduced their inventories in certain lines by more than 50 per cent since buying through the distributor. One reason for this is that we have determined overages existing in the stock of one airline and then have helped move the parts concerned to another airline where shortages existed. That's a "bonus service" which only a distributor could have provided.

By carefully analyzing airline usage, we can place orders 12 months in advance of the anticipated need and have the parts on our shelves 90 days before scheduled delivery.

**Q. Does the distributor have much effect in keeping the user from stocking obsolescent items?**

A. Obsolescence may be caused by (1) the manufacturer discontinuing the unit in question, or by (2) the purchaser overstocking it.

The distributor helps in both instances: he keeps in constant close contact with the manufacturer in order to anticipate an item's discontinuance and, since he is buying and stocking the merchandise for his own shelves, he makes a special effort to assure that it isn't over-bought.

**Q. To what degree do manufacturers buy from distributors?**

A. Some of our distributor members sell quite a volume to manufacturers—much of it in the nature of hardware. Southwest Airmotive makes very few such sales.

**Q. How do you rank your own organization, Southwest Airmotive Co., among fixed base operators?**

A. Well, we're celebrating our 20th anniversary and we naturally "rate ourselves" pretty high! We are told by at least two major aircraft fuel companies that we are private aviation's "biggest filling station."

Also—although there are no statistics to prove it—observers tell us we do more work on executive aircraft than any fixed base operator in the country. Actually, our principal commodity is Quality and, beyond that, our aspirations to be "first" are relatively few—and humble.

**Q. How many people does SAC employ? What was**



## FRIENDLY ENEMIES



One of the Navy's GRUMMAN GUARDIANS makes a pass over one of the Navy's submarines. It's a case of "friendly enemies" . . . for as the mongoose is trained to kill cobras, these big, carrier-based aircraft are designed to find and destroy submarines. One type of GUARDIAN, equipped with long range radar devices, hunts down the enemy. Then others, lighter on radar but heavier on bombs, come in for the "kill."

GRUMMAN AIRCRAFT ENGINEERING CORPORATION. BETHPAGE, LONG ISLAND, N. Y.

Contractors to the Armed Forces



## "... 8,000 airplanes serviced ... 90% executive type"

its gross revenue in 1951 and what is the growth factor as contrasted with the past few years?

A. We employ 350 persons, with a million-dollar payroll.

For the fiscal year ending May 31, 1952, our gross sales were approximately \$5,750,000, as compared with \$2,709,000 for the previous year.

Our plant area since our founding in 1932 has gone from 20,000 square feet to 185,000 square feet; our employee total from eight to 350, and our sales from \$90,000 to their present level nudging six million dollars.

Q. What is the fixed base operator's biggest problem today?

A. As I see it, the problem is largely one of money. With advancements in aircraft design and fabrication, there are new demands maintenance-wise, calling for new and large investments in tooling and equipment. More money is required for adequate inventorying and for labor—and for taxes.

The fixed base operator, too, should do his utmost to reach an effective diversification of activity. Aviation's graveyards are littered with the corporate bodies of enterprises which put all their eggs in one basket—and then had the bottom of the basket drop out.

Q. Has the military build-up had much effect on your fixed base operation?

A. We are engaged in a large-scale P&W Wasp Junior engine overhaul program under USAF contract, and also have contracted with the government to refuel all transient military planes in the Dallas area.

The bulk of our business, though, continues to come from civilian or "peacetime" sources. We built our company on service to civil aviation—and we shall continue to look in that direction for future growth and success.

### New Markets

Q. Has the decline of personal flying affected SAC's operations or those of ADMA?

A. Twenty years ago Southwest Airmotive dedicated itself to the job of providing fine-grain service for fine-grain planes—the larger business planes owned and operated by industry. That is a phase of flying that continues to progress and expand. We expect to continue to progress and expand right along with it.

Sales-wise, the lag on small airports prompted us—and most of the other distributors in ADMA—to seek out new markets, such as the airlines. However, we are not neglecting the operators on these airports and are doing our best to serve them well.

Q. How much of SAC's activities are concerned with corporation or business aircraft, as compared with pleasure aircraft?

A. In our service division, the answer is 90 per cent—or more. Incidentally, we found that last year our company provided services of one kind or another for approximately 8,000 airplanes—and, again, 90 per cent or more of these were executive or industrial types.

Q. Which phase of your fixed base operation, exclusive of parts distributorship, is growing the fastest?

A. Because of its USAF contracts, our Pratt & Whitney-authorized engine shop. However, based on purely civilian work, the aircraft shop probably is outstripping all others with its gains of the last two years.

Q. Does the fixed base operator have a legitimate role in working with the airlines—i.e., performing maintenance, fueling, etc.?

A. I offer a strong "Yes." A number of airlines have found that it makes good business sense to let someone else perform their overhauls, rather than invest in shops of their own. We perform a number of airline services in our shops and, in addition, handle the refueling for three airlines using Love Field.

Q. Why has there been a general decline in the number and quality of fixed base operators in recent times?

A. Under-capitalized and over-enthused, hundreds of men returned from World War II Air Force service to try for the fabled "millions" to be made when that equally-fabled Everyman's Airplane came into being. We all know what happened there—and none should consider it a barometer of private flying's success, or lack of it.

Many have fallen by the wayside for a lack of business sense, integrity, or a willingness to do a good job. Others, making money on GI flight training, shortsightedly failed to use some of that money in developing other and more durable facets of their operations. Still others admittedly were in business to make the proverbial "quick killings" and then get out.

The others—the good businessmen, farsighted planners, and honest servers of the flying public—are progressing, making money, and expanding.

Q. If the military build-up slackens, will SAC's operation be seriously affected—that is, is there an evident civil market to replace the present military business?

A. The demand for our services from civil customers is greater now by far than ever before. If we had no military work at the present time, we'd still be in mighty good shape. None of our shops—including the engine shop—is dependent entirely on military contract work.

Q. How big is SAC's engine overhaul activity?

A. We have about 200 persons engaged in engine overhauls, with a current production rate of eight engines per day. Most of these are Pratt & Whitney R-985 Wasp Juniors; quite a large number are for civilian customers. Our Wasp Juniors are overhauled on an assembly-line basis. Other types—mainly 1830's and 1820's—are rebuilt individually.

Q. How seriously has the increased cost of parts affected this business?

A. Increases in parts and labor prices definitely have not been in proportion to increases experienced in other everyday consumer goods. The plane owner can meet these rises because his business, too, has grown and prospered with the times.

I know of one engine accessory manufacturer just now ready to announce his first price increase in four years, and an engine manufacturer about to lift his prices for the first time in an entire decade!

Q. What role can the government play in improving the status of private flying in this country?

A. The most important thing the government can do is thoroughly "educate itself" on the tremendous significance of industrial and agricultural aviation. Few key people in government circles—both military and civil—understand and appreciate the scope of present-day civil flying.

Private flyers, and operators catering to them, can be "legislated and regulated" out of business. A streamlining and simplification of rules governing this phase of the industry is a real Must.





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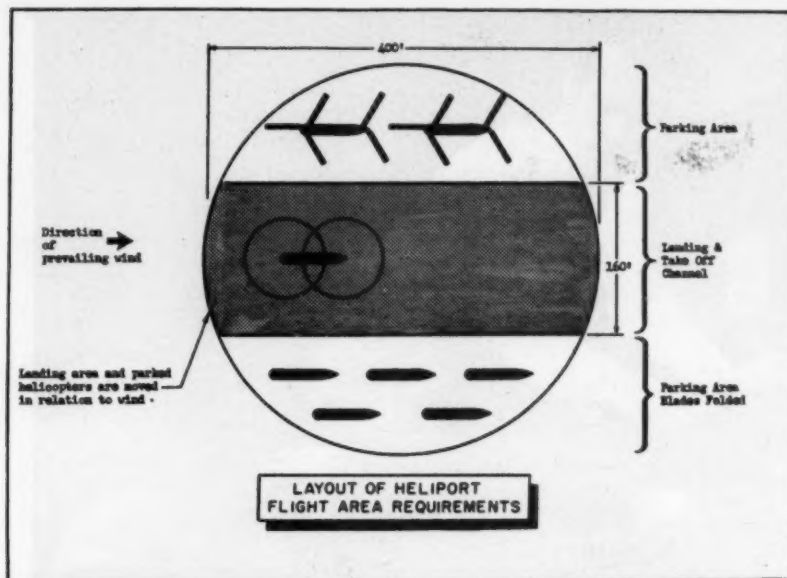
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AUGUST 4, 1952



## What About Tomorrow's Heliports?

Planning begins with traffic surveys, new laws, site selection; size and equipment come next.

By LOIS C. PHILMUS

**H**ELIPORT planning can no longer be thought of only in long-range terms. Although there are only three certificated helicopter services operating in the U. S. at this time, there are 27 applications on file with the Civil Aeronautics Board to provide helicopter services in communities throughout the country.

The commercial helicopter production picture also seems much brighter, as witnessed by the recent statement made

by Hans Weichsel, contract administrator of the Helicopter Division of Bell Aircraft Corporation, to the effect that there will be sufficient numbers of the larger-type craft on the market by 1954 or 1955 to bring the first major boom in commercial service.

With properly planned heliport facilities in surrounding communities, one major terminal airport could serve a radius of 100 miles by utilizing helicopter feeder line service, according to Harvey Gaylord, general manager of Bell's helicopter division and chairman

of the Helicopter Council of the Aircraft Industries Association. This could well solve the problem of how to locate future airports away from congested metropolitan areas.

Weichsel, who has been devoting much of his time to working with communities on preliminary heliport planning, has found that there are three basic steps to be taken toward this end by the civic-minded groups interested in one or both of the two types of service that are feasible for the rotary-wing craft in their areas. Commuter or inter-city service is one and feeder line service the other. The first things to do:

- Draft legislation on a community level to be submitted to state aviation authorities. This includes the enactment of new laws governing landing and altitude minimums to be observed within city limits, and revision of laws on the books applicable to fixed-wing craft but contrary to the nature of rotary-wing. The Helicopter Association of America, in San Francisco, is engaged in drafting standard legislation for presentation to city and county governments.

- Conduct traffic surveys to determine the number of potential passengers in the community or area and where they are most interested in going, i. e., from town to airport, or town to industrial centers. Such firms as Alex Hart & Associates in New York City are already specializing in such services.

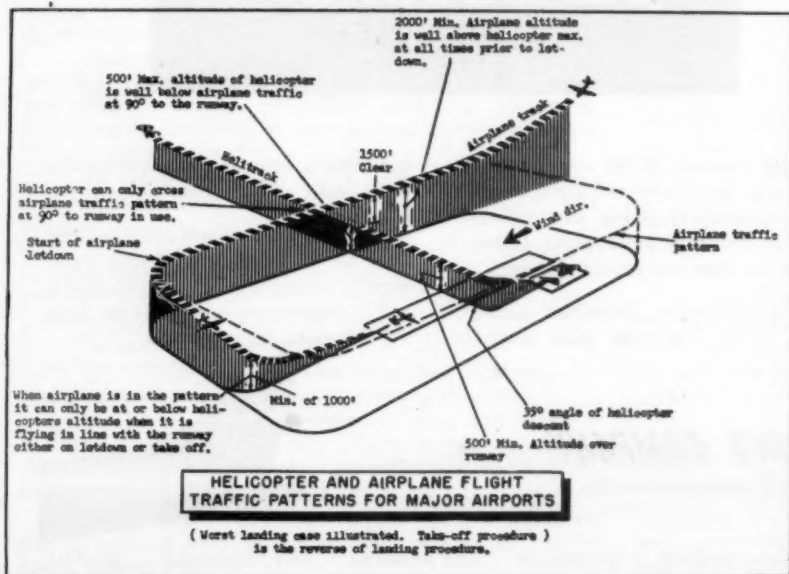
- Plan heliport sites based on the information, considering routes, approach areas, available surfaces, i. e., rooftops, city parks, waterfront areas. Approach angle recommended by Bell is five feet horizontal distance to one foot of obstruction height on all sides of the heliport, and 10-to-one on the prevailing-wind side.

### Rooftops Favored

Clarence L. Belinn, president of Los Angeles Airways, in his report to the Doolittle commission, states that long-range policy and planning with respect to metropolitan operations should embrace both rooftop and surface technique. He favors the former, however, because it is safer, more economical, and brings the operation closer to the heart of the community. When surface heliports are feasible, he continues, they should be made a part of the over-all city and municipal planning, with location emphasis placed in industrial areas or adjacent to the intersection of major arterial highways.

Fred M. Glass, director of aviation of the Port of New York Authority, points out that the high cost of land in metropolitan areas calls for highly efficient ground handling of helicopters in order to justify surface heliports.

Equally important to the location of



heliport sites in the metropolitan areas is the importance of proper landing sites at the airports being served. In setting up 'copter facilities at the airports, F. N. Piasecki, chairman of the board of Piasecki Helicopter Corporation, feels that the feeder line passenger must be landed within walking distance of the terminal. To avoid stacking, which is not as acute a problem as believed because of the 'copter's low operating altitudes, ground facilities must be planned for peak IFR landing rate. A helicopter flight traffic pattern independent of and compatible with that of airplanes in the same area is mandatory (see illustration).

Glass feels that a helicopter landing site on the roof of the terminal building equipped with elevator service to the lobby is one very feasible arrangement.

The actual size of the heliport area is even more flexible than the site location. Dependent on the 'copter traffic anticipated, the Civil Aeronautics Administration recommends a minimum size of 50 to 100 feet in diameter for single-engine use, dependent on surrounding obstructions as well as traffic.

Uni-directional approach may be entirely suitable, since rotary-wing craft are much less susceptible to cross-wind effects. CAA anticipates that a single strip of 100 to 200 feet should be adequate for take-off and landing operations for multi-engine helicopters.

### Three Times

Research on this question by Piasecki states that, taking allowances for over- and under-shooting into consideration, a clear area three times the length of the helicopter should be considered. In the case of the Piasecki H-16 (multi-engine, 40-passenger machine) a circular area 400 feet in diameter would be needed. The company estimates that this would permit 17 movements per hour, with parking area for seven helicopters (see diagram). Parked helicopters, according to this plan, would have to be moved as the landing area was changed.

Bell's heliport in Fort Worth is a 200-foot by 400-foot rectangular area, which can accommodate 12 single-engine parked helicopters.

Piasecki has found that the following ground equipment facilities would be necessary for visual and radio aids and for traffic and turn-around:

- **High-intensity** ground pattern lighting with dimming control for instrument approaches.

- **Visual-location** beacons of wider beam projection than those utilized by fixed-wing aircraft.

- **Rapid means** of refueling and equipment for quick turn around.

- **Tractors** and other handling equipment to haul the copters from the landing to parking areas.



BELL'S HELIPORT at Fort Worth accommodates 12 helicopters.

## Preliminary Airstop Design Criteria

Item	Major <sup>1</sup>	Secondary <sup>2</sup> and Suburban <sup>3</sup>
<b>Space/Weight</b>		
(a) Operational area		
—Landing and takeoff <sup>4</sup>	250 x 250 feet	250 x 250 feet
—Wheel loading	19,000 pounds	10,000 pounds
(b) Loading and unloading area		
—Number of units	17	14
—Weight carried per unit	30 x 90 feet 25,000 pounds	20 x 60 feet 13,000 pounds
<b>Traffic</b>		
(a) Operations per hour—peak period	30	10
(b) Passengers per hour—peak period	450	100
<b>Obstruction Clearance Data</b>		
(a) Desired elevation of Operations area from street level	100 feet	100 feet (Suburban, at ground level)
(b) Maximum elevation of operations area from street level	200 feet	200 feet (Suburban, at ground level)
(c) Minimum lateral obstruction	100 feet	100 feet
(d) Maximum angular clearance line beyond (c) in direction of operation	35 degrees	35 degrees
(e) Desired width of approach and departure area	500 feet	500 feet
<b>Maintenance Facilities</b>		
Space should be provided for minor emergency repairs. Could be incorporated in the overflow area.		
<b>Helicopter Dimensional Characteristics</b>		
Maximum length	80 feet	
Diameter of main rotor	80 feet	
Width (rotors folded)	25 feet	
Turning radius on ground	45 feet	
Height—ground to main rotor (minimum)	15 feet	
Seating capacity:		
a. Major airstop	20 to 30 seats	
b. Secondary airstop	20 seats	
Rotor configuration	Single (folding blades) or tandem	

<sup>1</sup> The major airstop will handle intercity line traffic, local airport to city traffic and suburban airport feeder traffic.

<sup>2</sup> Secondary airstop will handle limited intercity line traffic, secondary to airport traffic and suburb to airport feeder traffic.

<sup>3</sup> A suburban airstop will handle primarily suburb to airport traffic.

<sup>4</sup> Configuration of landing and takeoff areas should be square, or as nearly square as possible.

<sup>5</sup> Unit size of loading and unloading areas based upon dimension of largest helicopter contemplated for use at this type airstop.

Source: Helicopter Council, AIA.



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## Produced in Hartford

THE system of distributing a major part of defense production jobs to subcontractors was pioneered by Pratt & Whitney Aircraft—leading designer and builder of aircraft engines. Ever since its founding in 1925, Pratt & Whitney has pursued its basic policy of letting out about 50% of its work.

Actually 90% of the 5,280 companies on the active Pratt & Whitney subcontractors and suppliers list are classed as "small businesses" with less than 500 employees each. These companies are located in 34 states.

This system of subcontracting has many advantages. It allows for faster expansion in periods of national emergency and greater flexibility of factory operations. Further, it develops a basic team of specialists that can substantially reduce the cost of certain items of equipment. Also by sharing its work, Pratt & Whitney stim-

ulates industry by providing its subcontractors an opportunity of engaging in diversified production. Finally, subcontracting helps maintain a balanced labor force by providing steady jobs even when civilian production is curbed.

This year Pratt & Whitney will pay out many millions of dollars for the products of its 5,280 subcontractors and suppliers. Some 200 of these Pratt & Whitney subcontractors have served the organization for 26 years or more. Many of them, like Pratt & Whitney, have grown tremendously during the years of working together. As Pratt & Whitney's business increases, so does its subcontractors' business increase, and this is true even in normal times.

Today Pratt & Whitney is producing quantities of vitally needed aircraft engines for the Armed Forces and bringing the work of National Defense to everybody's door.

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## How Airwork Doubled Sales in 3 Years

With written contracts, big inventory, reliability, distributor flourishes; next—corporation aircraft.

By JOSEPH S. MURPHY

ONE of the relatively few engine overhaul agencies and distributors that flourished during civil aviation's postwar dark period and which is now consolidating its gains is Airwork, Inc., of Millville, N. J. Late last month, in a move which typifies the thinking which made possible Airwork's past record, the company called together all of its Class A distributors to show the way to better business tomorrow.

Highlights of the advice provided by members of Airwork, the Aircraft Owners & Pilots Association, and various engine and accessory manufacturers:

- **Business is increasing.** Bolstered by the stabilizing effects offered by production-line airline contract work, the increase in corporation and private aircraft business has been steady and offers a real potential.

To Airwork it has meant more than a 300% increase in the dollar value of inventory over the \$175,000 it had so invested in 1949. Ending its fiscal year on July 31, Airwork estimated \$3,500,000 gross sales will represent a 100% increase over the business it handled in 1949.

- **Written contract arrangements** solve many problems. Weakened customer relations which grow out of misunderstandings between the owner and the fixed base operator strike at the very roots of business. In this, as in so many

other businesses, the written word on what work will be done and at what cost it will be done can eliminate the problem.

- **Higher standards** of reliability and liability are coming. AOPA cautioned that the courts will hold the fixed base operators and the aviation industry in general more responsible in the future.

Although standards of repair and maintenance have been raised, they must

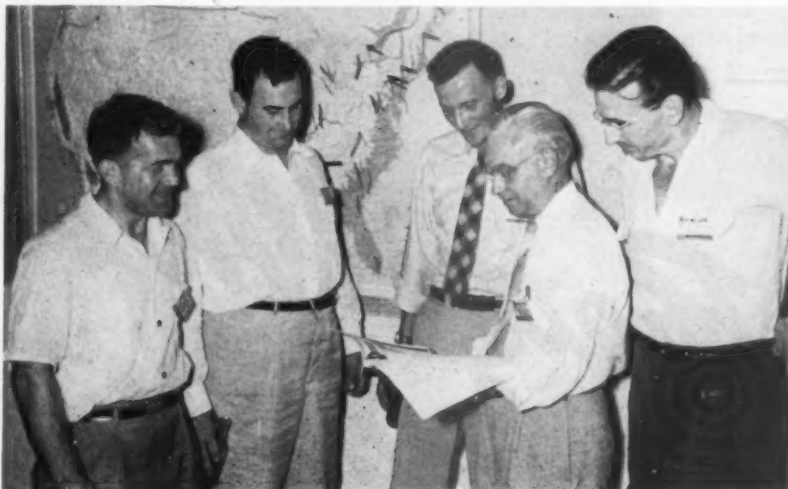
be continually lifted to even higher levels. A bulletin board in Airwork's shop carries the account of a recent fatal accident attributed to faulty engine assembly. A note cautions to this effect: "Let us not say that this couldn't happen here, but let us strive ever harder to see that it doesn't happen here."

- **Five executive-type aircraft** offer an optimistic view of the future. The eventual large-scale production of such light twin-engine aircraft as the Beech Twin Bonanza, the de Havilland Dove, the Twin Piper, a Cessna (proposed), and the Aero Commander present a promising picture for the operator.

- **Engine and parts** production is sound. Fears for P&W R-1340 parts shortages are groundless. The Pratt & Whitney Canada plant will go into production of this engine in the fall to meet the needs of the USAF and Royal Canadian Air Force. Civilian demands could also be accommodated if need be.

P&W production now involves R-2800, R-4360, and jet engines. Spare parts are also manufactured on a production basis for R-985, R-1340, R-1830, and R-2000 engines.

- **Military inroads** offer a threat to civil aviation. Airwork's business today is about 99% civilian. The deterioration of civil aviation recently reported by a resigning official of the Defense Air Transportation Administration, if permitted to continue, could seriously affect its continued growth and future health. Operational civil aircraft have dropped in number from 25,000 in 1951 to about 16,000 at present; certificated flying schools have dropped off 50% since 1947; the results have been attributed to the tendency of the military services to wastefully militarize civil operations wherever they find it possible.

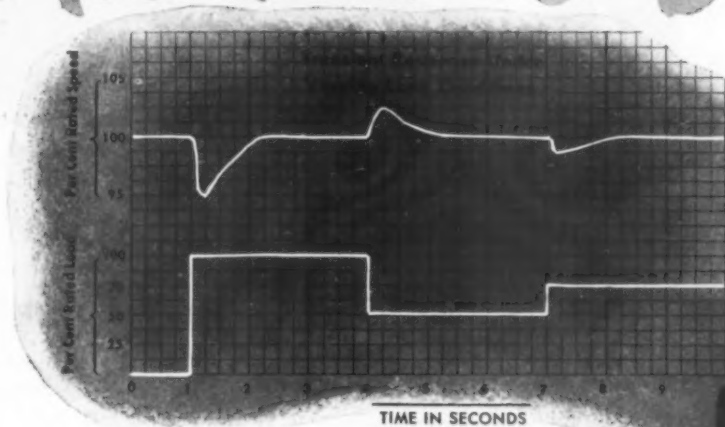


CLASS A DISTRIBUTORS look over new data book which describes Airwork-distributed products. Left to right, Pete Griffing, Wings, Inc.; L. E. Barnum, Walter Crow, Inc.; John Forbes, Aviation Division, Butler Co.; Frank Trimble and Bill Newton, Southern Airways.



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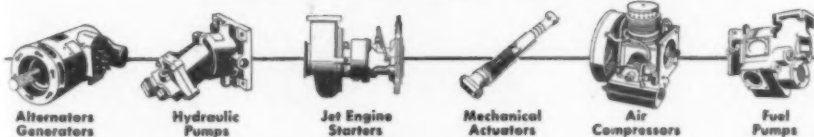
Constant output speed essential in the operation of alternators and desirable in drives for many other accessories is now obtainable with Air-Turbine Drives. In its new series of Air-Turbine Drives, Stratos has developed a control system which maintains output speed constant within  $\frac{1}{4}$  of one per cent over full operating range, from unloaded condition to as high as 200 per cent design load—from engine idle to full throttle and from sea level to beyond 40,000 feet. Stratos Air-Turbine Drives operate on supply air temperatures to 800°F, pressures to 250 psi and in an environmental temperature range of from -75°F to +200°F.

Stratos Air-Turbine Drives now designed range in power ratings up to 100 hp. Lightweight and compact, they are suitable for a wide variety of applications. Flexibility of installation facilitates remote location. Current designs can be modified readily to meet the specific requirements of specific installations.



**MODEL TP15-2**  
Designed to drive alternator providing power for airborne radar in the McDonnell "Banshee." Stratos constant speed feature holds alternator's frequency within  $\pm 1$  cps under all system demands.

### TYPICAL AIR-TURBINE DRIVE APPLICATIONS



For information  
on this and  
other Stratos  
equipment, write:



**Stratos** DIVISION  
FAIRCHILD ENGINE & AIRPLANE CORP.

Main Office and Plant: Bay Shore, Long Island, N. Y. • West Coast Office: 1307 Westwood Blvd., Los Angeles 24, Calif.

Other Divisions: Aircraft Division, Hagerstown, Md. • Engine Division, Farmingdale, N. Y. • Guided Missiles Division, Wyandanch, Long Island, N. Y.

**BEFORE LAUNCHING**, the Douglas Aircraft Company's self-inflating rubber lifeboat encased in an aluminum cylinder resembles an antique cannon. The aluminum cylinder serves as the basic hull after the boat is completely opened.



**WITHIN TWO MINUTES** after launching, the aluminum cylinder begins to open under pressure of carbon dioxide, and the rubber sections begin inflating.

## Survival on the Water

Douglas Aircraft Company has developed a self-inflating rubber life raft which is encased in an aluminum cylinder. Slightly more than 20 feet long and 21 inches in diameter, the air-sea rescue lifeboat begins to open under pressure of carbon-dioxide after launching.

The boat can be controlled and steered by remote radio or set on a prescribed compass course. It is equipped with a four-cylinder engine and can carry enough fuel to travel 300 miles.

Short ladders are suspended from the raised gunwales so that survivors can easily climb on board. It takes only minutes from launching time until the boat is fully inflated.



**COMPLETELY OPENED**, the boat is ready to receive survivors. Four-cylinder engine at left can propel the boat for 300 miles.

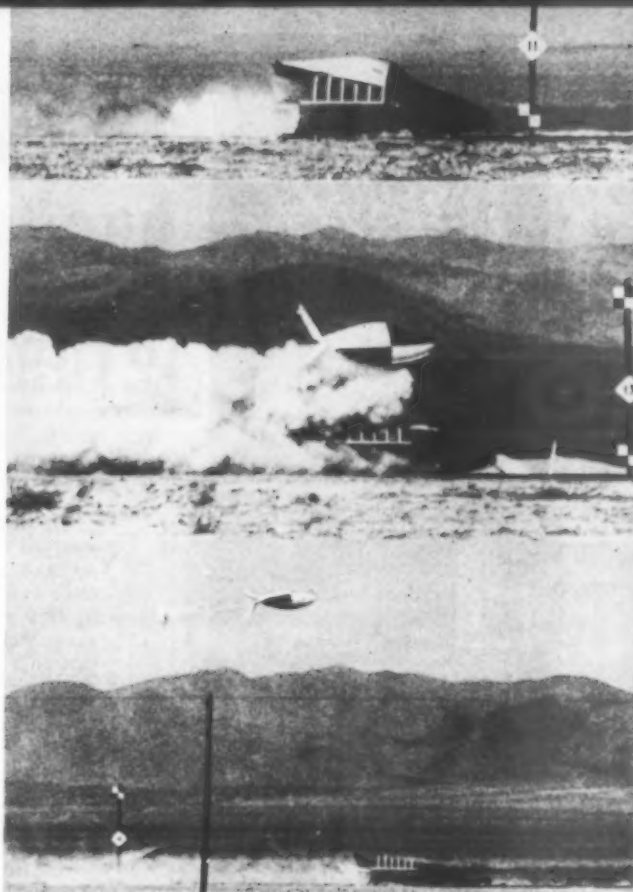


NEW ESCAPE DEVICE for supersonic jets is ejected from the plane as a self-contained unit.

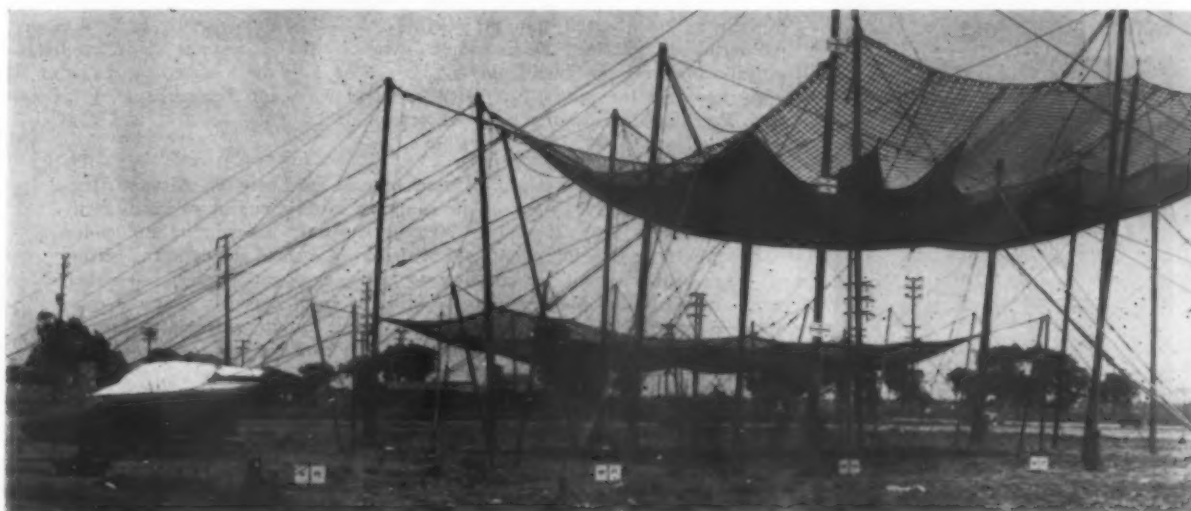
## Survival in the Air

A new escape device for pilots of supersonic jet has also been devised by Douglas Aircraft. It is a cockpit, in which, in case of emergency, the pilot is expelled from the plane by a rocket charge.

The compartment, designed for the Navy, has been sealed and pressurized against atmospheric conditions encountered above 50,000 feet. Three fins in the aft section unfold after the rocket charge explodes, and a small parachute opens, slowing it down. The tension on the small chute opens a main chute from which the cockpit is suspended during the descent. Insulated against cold weather, it has been designed to float in water.



THREE STEPS of escape device are shown during tests at Naval Ordnance Test Station, Inyokern, Calif. Over 200,000 pounds of rocket burst thrust capsule down 10,000-foot-long aero-ballistic test track. Reaching speed of close to 760 mph, believed faster than any land vehicle has yet attained, capsule raced forward at speed of sound near sea level. Parachute (visible at left, bottom picture) opened satisfactorily to slow descent.



ROCKET-EJECTED from a stationary rig into a rope net (above) at Douglas El Segundo Division, cockpit capsule attained height of 105 feet during one trajectory test.





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PAC's engine and accessory overhaul shops have been servicing airlines, corporations and private customers for 24 years.



#### AIRFRAME OVERHAUL

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Seattle, Wash.  
Kansas City, Kan. & Linden, N.J.



## Extra Section

By William D. Perreault



**B**EEN LOOKING for the average man. Ford Motor Company has fabricated just such a man on the basis of the Army's physical records from World War II. Designed for testing seats, armrests, head and leg room, the Average Man weighs 164½ pounds, is five feet nine inches tall. Ford's model is of plastic, with suitable hinged arms, legs, etc. Perhaps such a dummy is required for controlling spacing of the seats in some of these high-density coach aircraft.

From Australia comes word that Ansett Airways has been awarded \$75,600 in damages by the Australian Department of Civil Aviation for damages incurred during an unusual accident between a train and aircraft on the Mascot Airport in Sydney. On a rainy night in 1950 an Ansett DC-3 with 20 passengers aboard was taxiing to a runway on the airport to take off when it ran into a group of railroad cars on a line that crossed the runway. Although no one was injured, the plane was severely damaged and Ansett claimed \$140,000 damage.

If an air freight forwarder consolidated birthdays the way he consolidates freight shipments, he'd have a bonanza with the July 6 birthday in the family of TWA president Ralph Damon. Damon's birthday is on July 6. His first grandson was born on that date, and this year when July 6 rolled around again his daughter Priscilla (Mrs. Harrison Rainie, Jr.) presented him with a second grandson.

In our July 21 issue we cited Douglas figures ("The Cost of Complexity," page 63) showing the effect of weight savings on aircraft production for a given amount of money. A 25% reduction in total airplane weight would provide 1.43 times more airplanes for the same dollar expenditure. A good example of this is the Douglas Skyraider, which was built nearly 2,000 pounds under the specified contract weight and which nonetheless is an outstanding performer. Douglas practices what it preaches.

Lockheed received this memo from a field representative: "A student pilot on his first solo flight in a T-33 got into trouble at 20,000 feet when he found himself in an inverted spin at Wichita AFB. He subsequently entered a dive, recovering at 500 feet. During these gyrations the plane was subjected to 11.8 positive G's and possible 4 negative G's. The airplane suffered warpage of the wing tips and the pilot sustained a sprained back and hemorrhage of the eyes. Both the airplane and the pilot are repairable."

There is a constant interchange of mail between Airwork, Inc., of Millville, N. J., one of the country's leading engine overhaul facilities, and Airwick, another New Jersey outfit specializing in deodorants. The Post Office mix-ups which keep each of the concerns getting the other's mail, in addition to being aggravating, also have their comical side. Mail arriving at Millville from Airwick is apt to carry a notation "This is for the engines," while bundles directed to Airwick sometimes carry messages such as "This package was mis-scent."

A recent issue of *U. S. News & World Report* carries this summary of the cost of "fringe" benefits to the employer on the basis of a survey of companies in Cleveland: Pension plans, eight cents per hour; vacations, six cents per hour; rest periods, five cents per hour; holidays and social security taxes, four cents each per hour; insurance, wash-up time, and lunch periods, three cents each per hour; bonuses, two cents per hour; and workmen's compensation and cafeteria expenses, one cent each. This is not all-inclusive.

# HEADQUARTERS

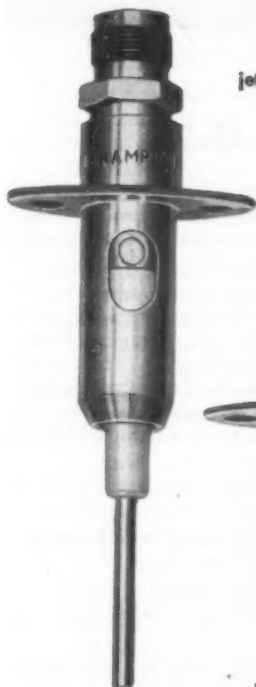
## for the Most Advanced Spark Plug Requirements!

The familiar Champion RC26S and R37S-1 on the right are the standard spark plugs by which others are measured in the industry.

However, even though these two types meet the vast majority of current aircraft spark plug requirements, they are far from representative of the full line of Champions for aircraft engines—both reciprocating and jet.

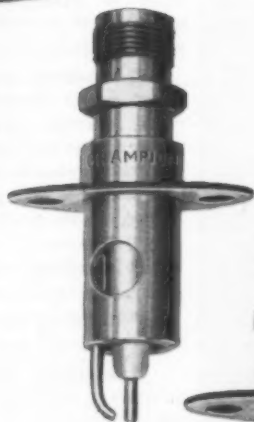


**F-14-8**  
jet ignitor plug



### FOR EXAMPLE:

The Champion F-14-8 was the first jet ignitor plug permitting dependable high altitude starting of the General Electric J-47 engines installed in the B-36 and B-47 bombers.



**F6A-12**  
jet ignitor plug



**F-19**  
jet ignitor plug

Champion manufactures spark plugs *exclusively*—this specialization has always been a policy of the company. It is our conviction that this concentration of all of our resources and ingenuity on the single product—research and engineering, both ceramic and electrical, manufacturing and distribution—inevitably insures a better product.

That's why Champion is headquarters for spark plugs, whether it be in the aircraft, automotive, industrial or marine engine field.

SPECIFY

# CHAMPIONS

AND FLY WITH CONFIDENCE

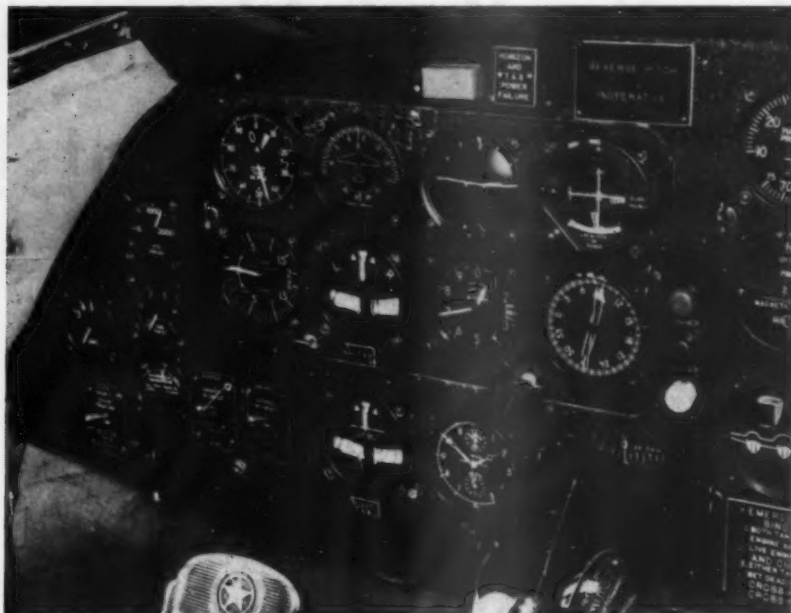
CHAMPION SPARK PLUG COMPANY, TOLEDO 1, OHIO

AUGUST 4, 1952

# Maintenance Bulletin Board



INVERTER circuit breaker modified.



LEFT INSTRUMENT panel in the modified 2-0-2.

## CCA Modifies Its Martin 2-0-2's

**M**ODIFICATIONS made by California Central Airlines in its Martin 2-0-2's are shown in the accompanying photos of the left instrument panel, the overhead electrical panel, and the inverter circuit breaker installation.

CCA modifications in the 2-0-2's also include:

- **Reversing** the positions of the electric and vacuum operated turn-and-bank instruments to centrally group vacuum and aneroid-operated instruments for more efficient use during flight in case electrical failure to instruments occurs.

- **Reworking** of the emergency brake pressure system to require pilot operation of the shut-off valve. This is to prevent complete loss of hydraulic pressure in case a break or leak should occur in the hydraulic accumulator system.

- **Installing** red warning light on ADF/VOR toggle switch to light up when VOR radio magnetic indicator is used. This gives the pilot visual assurance that selector is on the VOR position and that the number one ADF needle is not homing on a low frequency range station during approach.

- **Installing** extended fluorescent-

tipped selector switch on radio jack boxes so pilots cannot make wrong selections when using VHF navigation receiver. (ILS, VOR and VAR).

- **Installing** three additional inverter circuit breakers, rewiring of inverter circuits, and changing inverter power warning lights. This project eliminates possible loss of both inverters and horizons and power warning light failure if an open circuit within the system occurs.

- **Installing** non-glare light by emergency brake pressure gauge.

- **Installing** non-glare red spotlights over each radio jack box.

- **Installing** placard beside fuel selectors outlining emergency fuel management.

- **Installing** approach and landing check lists in placard form on the instrument panel. One of the objectives of this is to cut out check-list glare during night operations.

- **Connecting** ice light circuit to a two-position switch and to the navigation light flasher motor for use in congested areas at night.

- **Changing** pitot heater circuit from single to double breaker system.

- **Reworking** fire extinguishing sys-



OVERHEAD electrical panel.





## INFORMATION ON POSITIONS AT NORTHROP

Northrop Aircraft, Inc. is engaged in vitally important projects in scientific and engineering development, in addition to aircraft production. The program is diversified, interesting and long-range. Exceptional opportunities await qualified individuals.

The most responsible positions will go to top-caliber engineers and scientists. However, a number of excellent positions exist for capable, but less experienced, engineers. Some examples of the types of positions now open are:

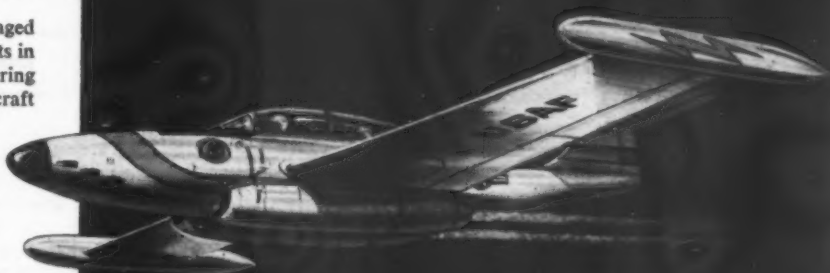
ELECTRONIC PROJECT ENGINEERS ...  
ELECTRONIC INSTRUMENTATION  
ENGINEERS ... RADAR ENGINEERS ...  
FLIGHT-TEST ENGINEERS ...  
STRESS ENGINEERS ...  
ENGINEERING DRAWING CHECKERS ...  
AERO- AND THERMODYNAMICISTS ...  
SERVO-MECHANISTS ... POWER-PLANT  
INSTALLATION DESIGNERS ...  
STRUCTURAL DESIGNERS ...  
ELECTRO-MECHANICAL DESIGNERS ...  
ELECTRICAL INSTALLATION DESIGNERS.

Qualified engineers and scientists who wish to locate permanently in Southern California are invited to write for further information regarding these interesting, long-range positions.

Please include an outline of your experience and training.

Allowance for travel expenses.

Address correspondence to  
Director of Engineering,  
Northrop Aircraft, Inc.  
104 E. Broadway,  
Hawthorne, California



## ON GUARD!

Guardians of the upper reaches of the Western Air Defense Command are the men of the 84th Squadron, at Hamilton Air Force Base. The 84th flies the U. S.

Air Force's new all-weather interceptors —  
fast, deadly *Northrop F-89 Scorpions*.



Northrop Aircraft, Inc.  
Hawthorne, California

*Pioneer Builders of Night and All-weather Fighters*



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● Airplanes controlled entirely by a combination of electronic and electro-mechanical units are now a reality! The vision of avionic engineers made this possible... why not apply these unique abilities to your product... an inquiry will receive prompt reply.



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**NATIONAL Airlines** *Airline of the Stars*

tem to simplify operation and assure more positive fire control throughout aircraft.

● **Changing** oil and manifold pressure-indicating systems from AC/Magneson to direct-reading system.

● **Installing** oil quantity gauge in cockpit.

● **Reworking** anti-icing system to prevent loss of two heaters should a short occur in the existing control circuit.

## Frozen Valve Relocated

Trouble experienced by Trans World Airlines with freezing of wash water tank filler line check valves in Lockheed Constellation aircraft was corrected by relocating the check valve in a vertical position. In the valve's former horizontal position water would collect in it and freeze, making it inoperative. The correction came to light through the company's suggestion system.

## Daily Plane Utilization

### LOCAL SERVICE

All American					
DC-3	.....	5:00	4:57	5:12	6:02
Bonanza					
DC-3	.....	4:15	4:03	4:14	4:55
Central					
DC-3	.....	5:47	6:24	5:58	5:06
Empire					
DC-3	.....	4:46	4:49	4:43	4:39
Frontier					
DC-3	.....	7:06	7:09	7:12	7:16
Lake Central					
DC-3	.....	4:34	5:42	4:21	4:53
Beech					
Bonanza		4:08	1:21	1:23	1:30
MCA*					
DC-3	.....	5:41	5:35	5:14	5:46
Mid-West					
Cessna 190		3:17	2:46	2:42	N.A.
Ozark					
DC-3	.....	5:59	5:49	6:13	6:30
Piedmont					
DC-3	.....	8:07	8:02	8:26	8:20
Pioneer					
DC-3	.....	6:45	7:12	7:04	6:49
Robinson					
DC-3	.....	4:56	4:20	4:25	5:37
Southern					
DC-3	.....	6:03	6:06	6:01	6:01
Southwest					
DC-3	.....	5:46	5:45	5:48	6:09
Trans-Texas					
DC-3	.....	6:04	5:51	5:50	5:26
West Coast					
DC-3	.....	5:21	5:01	5:02	5:04
Wiggins					
Cessna T-50		1:42	1:55	1:43	1:54
Wis. Central					
DC-3	.....	5:37	6:04	5:50	6:14

Figures cover local service segment Route 106.  
N.A.—Not available.

AMERICAN AVIATION

## Master Kit Cuts PAA Maintenance Costs

Pan American's Latin American Division reports annual savings running into thousands of dollars since the adoption of a Master Line Station Kit developed by H. F. ("Cowboy") Williams, maintenance superintendent. Key to the kit system is the consolidation of old-style maintenance kits for each of the eight types of aircraft into one manual, tabulating all the tools, parts, equipment, technical data needed for emergency service of all aircraft.

The development project was not a small task, as the final manual represents a composite of more than 5,000 items listed in the obsoleted spare part kit lists. Each item had to be reviewed for interchangeable use among aircraft and coded as such. IBM methods are used for page printing and indexing, to facilitate change, additions, and deletions.

Under the old kit system, according to Williams, as many as 1,138 spark plugs were stocked in separate kits for the various aircraft. Using the master kit only 240 plugs are allocated. Past establishment of parts kits were largely by trial and error, he said, but now for the first time in Pan Am's 24-year history the utilization of items in the kit can be fully analyzed.

## AA Modifies Engines

American Airlines reports modification of the engines on its Convair aircraft to provide interchangeability between left- and right-hand positions. The rework involves installation of a supercharger drive on all engines instead of right-hand engines only, as was the practice in the past. American's Convair 240 aircraft utilize a Stratos supercharger mounted on the right engine.

Other engine modifications now in process include installation of the recently designed siamese exhaust system, replacing the triamese configuration received with the airplane, and the conversion of the engine power section to the CB-16 cylinder installation. The latter rework will also be accomplished on the P & W R-2800 engines used in American's DC-6 aircraft.

## Door Sealer Wins Prize

American Airlines has awarded \$25 to Orus D. Miller, working in American's Tulsa base, for a tool design consisting of a pair of water pump pliers which have had the jaws modified to fit the Douglas DC-6 door channels. The device is used in installing door seals. It presses the door seal in place faster than the hand method and minimizes the possibility of damage.

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*Beaver*

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**Wearing the proud insignia of America's Army and  
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## Lear Demonstrates 'Little Black Box'

Lear's F-5 automatic pilot and approach system was recently demonstrated by its president, W. P. Lear, to KLM Royal Dutch Airlines, British Overseas Airways Corporation, Air France, Pan American World Airways, and Colonial Airlines. Lear's "little black box" measures 8 x 10 x 13 inches, and the entire unit of the Lear system weighs 79 pounds.

## TCA To Employ Flight Engineers

For the first time in its history Trans-Canada Air Lines will employ flight engineers, the occasion being the arrival of its five Lockheed L-1049 Super Constellations, scheduled for delivery in 1954.

The engineers will be responsible to the captain in flight and to the regional operations organization on the ground.

Other progress in preparation for the new aircraft reported by TCA includes design of galleys which KLM Royal Dutch Airlines will build for the line, a new electrical system worked out by Lockheed for TCA, and an aircraft service dock design, the construction of which has started at Montreal.



WHEREVER YOU  
GO  
WHATEVER YOU  
FLY

## ARC EQUIPMENT

### Meets Your Operational Needs

ARC Type 11A meets basic needs by providing VHF transmission, LF range reception suitable for the exacting requirements of night instrument operation, and rotatable loop navigation.

ARC Type 17 is 2-way VHF equipment, including tunable VHF receiver and one or more 5-channel, crystal controlled VHF transmitters.

ARC Type 12 (illustrated) gives you advantages of both Type 11A and Type 17 systems.

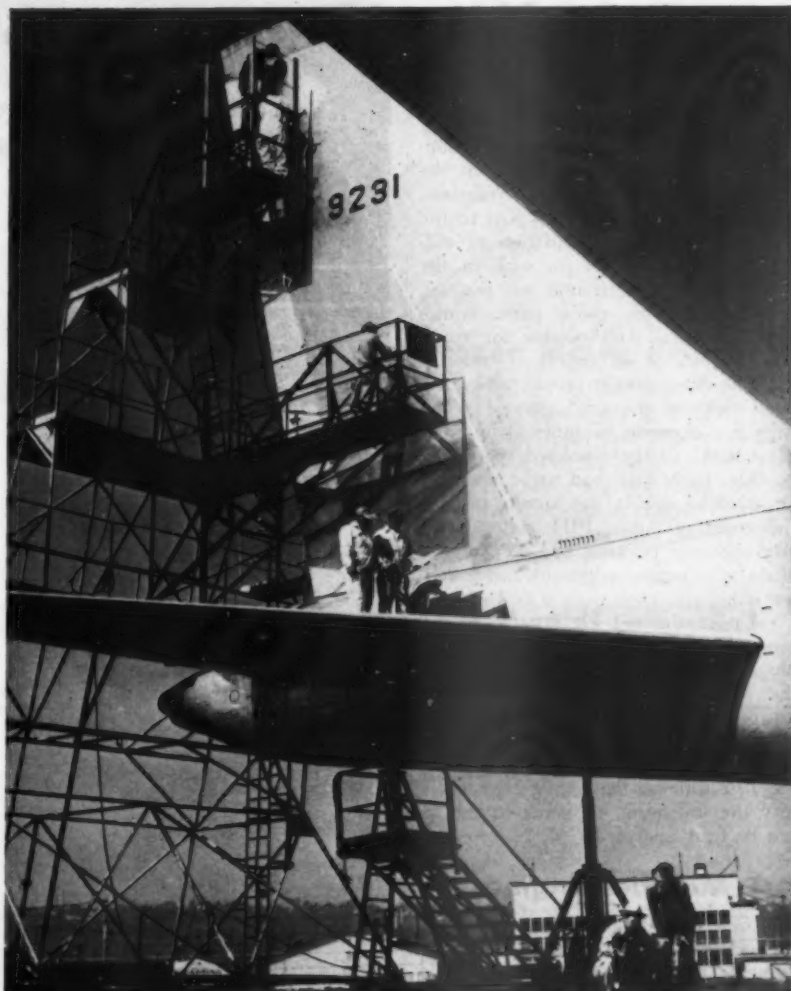
All ARC airborne equipment is designed for reliability and performance, not to meet a price.



**AIRCRAFT RADIO CORPORATION**

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Dependable Electronic Equipment Since 1928



**Special scaffolding** is necessary to permit adjustments and inspection on the 48-foot-high vertical tail of the eight-jet Boeing YB-52 Superfortress prior to test flight. This is one of two prototypes.

## Jet Transport, Polar Navigation Discussed

Navigational problems in trans-polar operations and aboard jet transports were the two principal subjects discussed at the recent London meeting of the International Airline Navigators Council.

The former related to the proposed Scandinavian Airlines System route from California to Scandinavia over the North Pole which will be tested upon the delivery flight of a Douglas DC-6B to SAS this November.

IANC believes that the critical requirements of jet navigation dictate the need for a full-time navigator. On British Overseas Airways Corporation Comets one of the pilots assumes the duties of navigator, taking his position at the

navigator's station when the flight reaches the top of climb and remaining there until start of descent.

## Seven Prop-Reversing Circuit Directives Out

CAA departed from its routine of issuing Airworthiness Directives every other week in the recent publication of seven directives requiring propeller-reverse-circuit rework to prevent inadvertent reversal. The directives issued and the aircraft affected are listed below:

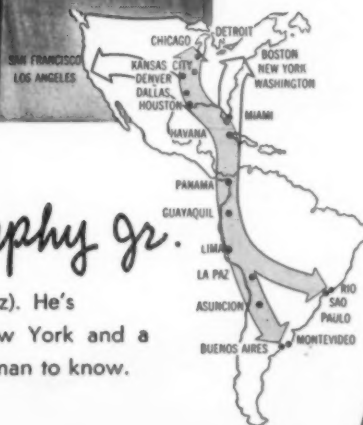
- 52-13-2 Lockheed 49 series
- 52-14-1 Douglas DC-6, DC-6A and DC-6B
- 52-14-2 Convair 240 and 340
- 52-15-1 Boeing 377
- 52-15-2 Martin 202
- 52-16-1 Martin 202A
- 52-16-2 Martin 404



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The world's biggest, busiest city is next door to South America these days. Just dial Plaza 7-0065 and you'll be in friendly, international hands. Braniff's staff is up-to-the-minute on Havana, Panama, Lima, Rio, Buenos Aires, all Latin America. And they'll be glad to help with quick confirmation of reservations, documentation and flight times. In fact, they're personally interested in everybody who flies Braniff. And they're located where they can do you the most good (at 630 Fifth Avenue, Rockefeller Center).

So, if you've passengers leaving or returning through New York's gigantic gateway, ask Braniff for the same friendly service that's made them famous throughout the Western Hemisphere!

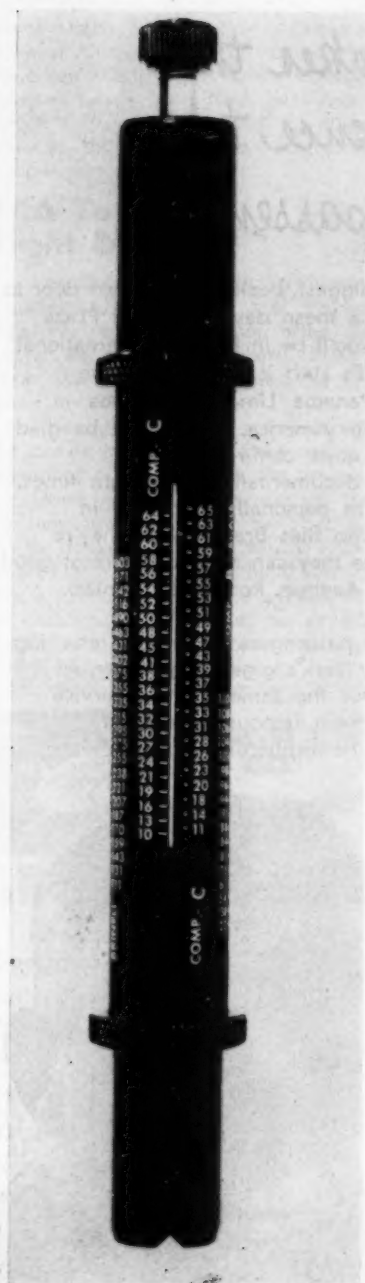


*meet H.H. Murphy Jr.*

(his friends call him "Buzz"). He's Braniff's manager for New York and a very handy and valuable man to know.

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**BRANIFF**  
 INTERNATIONAL AIRWAYS  
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**Hardness tester** weighing only seven ounces and containing only two moving parts is marketed by Peabody Industries, Inc. Said to provide accuracy identical to that of large equipment, the tester permits direct readings on any of three different Rockwell and Brinell scales without conversion charts. Address: Peabody Industries, Inc., 1819 Broadway, New York 23, N. Y.



#### Wire terminator

features increased production at no cost. Automatic Amp-O-Lectric unit is loaned to users on receipt of an order for specified quantities of A-MP solderless terminals. Address: Aircraft-Marine Products, Inc., 2100 Paxton Street, Harrisburg, Pa.



**Data-recording camera** developed from basic design by North American Aviation is announced by Aremac Associates. A 35-mm motion picture type camera designated the Model 1013, it features light-weight, compact design. Power requirements are 28 volts d-c or 110 volts a-c optional. Literature available on request. Address: Aremac Associates, 329 West Washington Street, Pasadena, California.



**Baggage cart** of lightweight design, for use by small airline stations, is now available. Of aluminum channel frame construction with oak flooring, the cart is rated for 1,200 pounds. Address: Texas Metal & Manufacturing Co., Inc., 6114 Forest Park Road, Dallas, Texas.

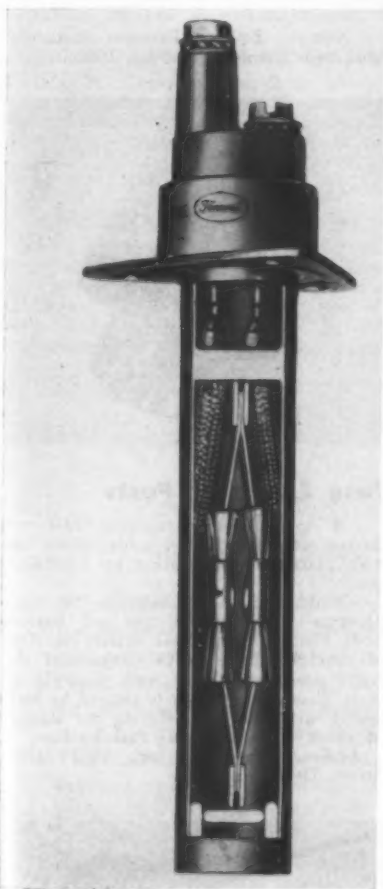


# New Products

## Liquid Steel

Liquid Stainless Steel, a protective coating against rust and corrosion consisting of actual stainless steel reduced to thousands of microscopically fine flakes and combined with vinyl plastics to form a quick-drying liquid, has been announced by Slip-On Incorporated. Applied by spray, brush, or dip, to metals, wood, and composition materials, the liquid dries tack-free in five minutes.

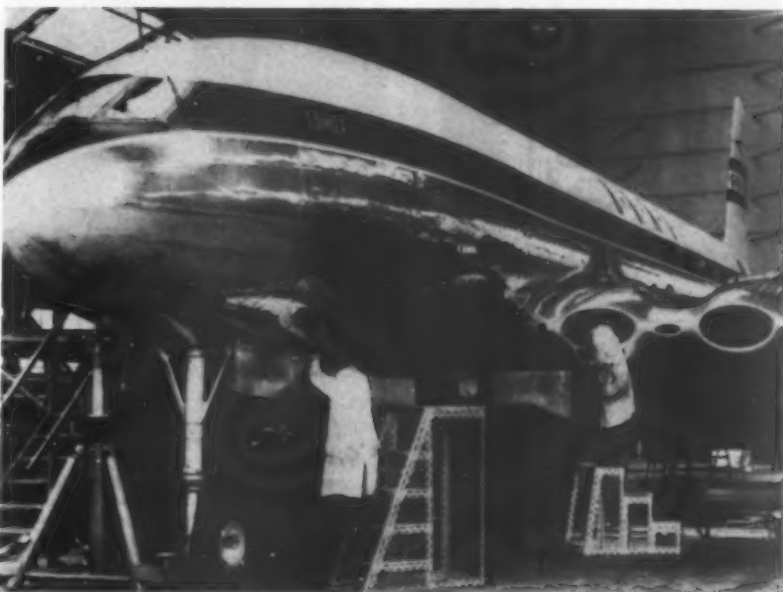
Address: Slip-On Incorporated, 401 Broadway, New York 13, N. Y.



## Sealed Fire Detector

An improved version of the Fenwall fire detector which is hermetically sealed in a stainless steel shell is being installed in Eastern Air Lines' Lockheed Super Constellations. Used with the newly designed dual-loop detection and warning system in this type aircraft, the detector, reportedly provides an instantaneous and virtually foolproof indication of fire and overheating.

The double-loop system, which may include as many as 132 of these detectors, is said to reduce materially the long-standing problem of false alarms from acci-



## Construction Unit Termed 'Most Versatile'

An all-purpose construction unit, called DexAngle, has been introduced into the U. S. by the Acme Steel Company. Termed the most versatile unit since the boyhood erector set, it features a quick, easy, and economical way to build your own equipment.

DexAngle consists of 3" by 1½" slotted, galvanized .080" steel angles, which are available in 10-foot lengths. These can be used to build workstands, ladders, stock bins, tables, benches, cabinets, hand trucks, etc. No welding is necessary; assembly requires nuts and bolts only. To assist measuring, diamond-shaped indentations are provided at three-inch in-

tervals. Although a hacksaw may be used, a one-stroke, shear-type cutter is available to speed cutting operations.

Safe load limitation on 5 foot 6 inch uprights is 1,200 pounds. Additional strength can be obtained by combining two or more pieces to form "Z" angles, etc.

DexAngle stresses the "no-waste" feature. Every piece left over from a completed job, regardless of size, can be returned to stock for future use. When equipment built with DexAngle is no longer needed it can be disassembled and the parts reused for other purposes.

Address: Acme Steel Co., 2840 Archer Ave., Chicago 8, Ill.

dental lead grounding. It continues to function in whole or in part despite a break in either loop and gives an indication of a short in the wiring.

The detector's design is an application of the differential expansion principle. The outer stainless steel shell serves the double purpose of functioning as one of the expanding components while at the same time housing the operating mechanism, two low-expansion struts assembled under compression. Mounted on the struts and insulated from them are a pair of silver contacts which are connected to the fire detector circuit by a sealed lead through the detector head. A rise in temperature causes the outer shell to expand, thereby reducing the compression on the struts and allowing the contacts to close when the preset warning temperature is reached.

The detector is designated model 17343-62 and meets CAA Technical Standard Order C11 and SAE 401A Specifica-

tions. It weighs 2.5 ounces and measures 4⅞" long by ⅝" in diameter.

It is impervious to moisture, oil, and other contaminants and cannot be actuated by outside mechanical forces such as vibration, shock, etc. Sketches show cut-away view of detector and typical two-wire circuit in which it is used.

Address: Fenwall, Inc., Ashland, Mass.

## Jointing Compounds

A group of jointing compounds called Plastic Hermetite used successfully in the British aircraft industry has been introduced into the U. S. by Combined Agencies Corporation. One compound, Plastic Hermetite 5069, features acid-resisting qualities and is designed for use on battery trays.

Address: Combined Agencies Corporation, Union Trust Bldg., Washington 5, D. C.



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PAC's engine and accessory overhaul shops have been servicing airlines, corporations and private customers for 24 years.



#### AIRFRAME OVERHAUL

PAC's 24 year dependable service record is unequalled. With over one million sq. ft. and thirty depts. to serve commercial and military aircraft.



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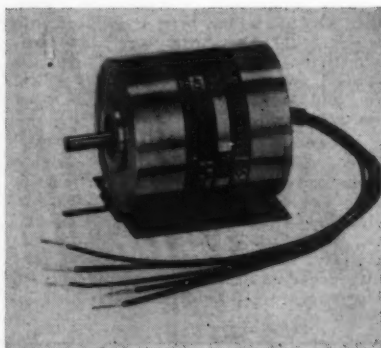


### Tubing Clamps

Duct and tubing clamps featuring a high-strength and versatile-latch design have been announced by Wheel Craft Corporation.

Said to provide a most economical means of connecting ducts and tubing, the clamps can be modified to provide straps and supports for ducts, equipment or accessories. The standard latch is notched to provide a quick-disconnect clamp. A modified bolt permits positive latching and easy release.

Address: Wheel Craft Corporation, Azusa, California.



### Servo Motor

A precision servo motor designed for use in aircraft control systems is announced by G-M Laboratories.

Stall torque is approximately 2 inch-ounces, and dimensions are 1.7" in diameter, 1 3/4" long. Available for frequencies ranging from 60 to 400 cycles.

Address: G-M Laboratories, Inc., 4300 North Knox Ave., Chicago 41, Ill.

### Small Toggle Switches

A series of small toggle switches designed for use in space-limited locations have been introduced by the Micro Division of Minneapolis Honeywell Regulator Company.

The new switches, developments of the Micro subminiature switch, ISMI, are available in single-pole, double-throw (assembly 6AT2) and double-pole double-throw (assembly 6AT3). Electrical ratings

of the basic switch, ISMI, are: motor or resistive load: 2 amperes, 20 volts d-c; inductive load at sea level: 2 amperes, 30 volts d-c; inductive load at 50,000 feet: 1 1/2 amperes, 30 volts d-c; 5 amperes, 125 or 250 volts a-c.

Overall dimensions of the 6AT3 assembly are 25/32" long, 1 21/64" high, and 21/32" wide.

Address: Minneapolis Honeywell Regulator Company, Freeport, Illinois.

### Stock Drawers

An all-steel, 18-drawer unit for stocking bolts, screws, electrical and other hardware supplies has been placed on the market by the Equipito division of Aurora Equipment Company.

Overall dimensions of the unit are 18" deep, by 14" high, by 34" wide. Drawer sizes are 5 1/2" wide, 3 1/2" high, and 17" deep. Each is equipped with two dividers adjustable on one-inch centers.

Address: Equipito, Division of Aurora Equipment Company, Aurora, Illinois.

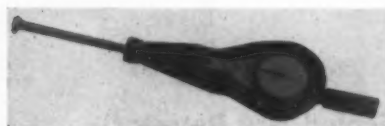


### Fuse Extractor Posts

A mold-sealed, watertight fuse extractor post featuring no solder joints has been placed on the market by Littelfuse, Inc.

Molded of black bakelite, the unit prevents leaks because top and bottom body contacts are actual inserts at time of molding. Rubber "O" rings seal the front panel and knob seats squarely in shell. Ease of extraction is assured by leaf-spring grip on fuse offering no danger of shock when removing fuse by hand.

Address: Littelfuse, Inc., 1865 Miner Street, Des Plaines, Ill.



### Dial Bore Gauge

A dial bore gauge designed to measure small-diameter bores from 0.250" to 0.375" has been introduced by the Standard Gage Co., Inc. Designated Model 00, the gauge utilizes interchangeable "centering-size" discs which are made a few thousandths of an inch smaller than the bore to be measured. The gauge is easily and accurately read, according to the maker, providing graduations of 0.0001".

Address: Standard Gage Co. Inc., Poughkeepsie, N. Y.

## Technical Literature

**RECEIVING STATIONS:** An 18-page illustrated brochure, available from the Pacific Division, Bendix Aviation Corp., Olive and Lake Sts., Burbank, Calif., contains data on the standard telemetering receiving station recently developed. Construction and operation of stations and components are described and pictured.

**STEAM GENERATORS:** Prepared as a guide for engineers, consulting engineers and architects, 28-page Bulletin #2000 sets forth details on the Preferred unit steam generator, designed by Preferred Utilities Manufacturing Corp., 1860 Broadway, New York 23, N. Y. A fully described list of standard and accessory equipment is incorporated.

**DRILLING AND TAPPING MACHINES:** Kaukauna Machine Corp., Kaukauna, Wisc., presents its complete line of universal and horizontal drilling and tapping machines in a 12-page illustrated catalog with complete data, specs, and descriptions.

**DIMENSIONAL QUALITY CONTROL:** "The Science of Precision Measurement" by the DoAll Co., 254, N. Laurel Ave., Des Plaines, Ill., has to do with the practical application of nationally and internationally agreed upon linear standards of measurement

or dimensional quality control. The 256-page handbook deals with clearances and tolerances, gauge blocks, gauge instruments, sine bars, optical flats, electric comparators, and statistical systems of quality control. Photographs, diagrams and tables are generously used. A complete glossary is included.



**SINTERED MAGNETS:** Lists of specifications for a range of magnets of interest to thermostat, meter, switch and other small device manufacturers is offered in Catalog No. 12, prepared by The Indiana Steel Products Co., Valparaiso, Ind.

**NYLON-LINED BEARINGS:** Operating principles, design, advantages and application of Nylon-lined Bearings for rotation and reciprocation are detailed in a four-page folder published by Thomson Industries, Inc., Manhasset, N. Y.

**HOSE FITTINGS AND ASSEMBLIES:** Aeroquip Bulletin No. 223 includes specifications on Aeroquip hose assemblies and components, flange-type hose fittings and self-sealing couplings. Cutaway illustrations are utilized. Requests for copies should be directed to Aeroquip Corp., Jackson, Mich.

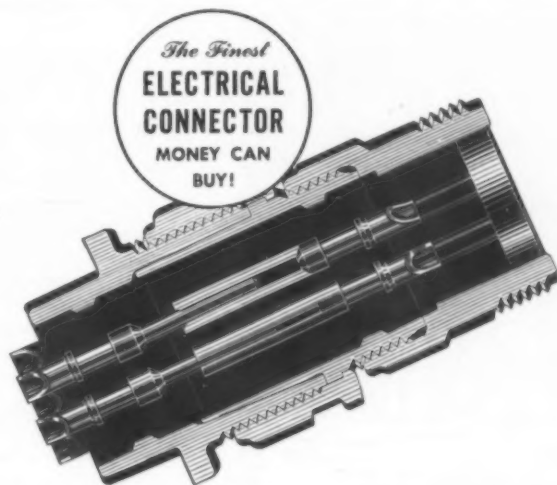
**TOOL STEEL ELECTRODES:** Bulletin AR52-1 is a technical and "how-to-do-it" brochure on Tool-Arc tool steel electrodes for welding tools and dies prepared by the Alloy Rods Co., York, Penna. Before-and-after photos are used, as well as tempering curve graphs.

**INDUSTRIAL IMPRINTING:** "How Gottscho Imprinting Machines Lick the Marking Problem in Defense Production" shows typical applications of various Gottscho units in plants making everything from jet engines to cartridge cases. Available from Adolph Gottscho, Inc., Hillside 5, N. J.

**SOLDERLESS WIRE TERMINATION:** Aircraft-Marine Products, Inc., 2100 Paxton St., Harrisburg, Pa., has just published a new book dealing with quality control of the entire solderless wire termination process. Titled "A-MP Quality Control," the book was prepared for electrical engineers.

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## Airline Commentary

By Eric Bramley

**A**NCHORAGE, ALASKA—This column is being written from Alaska, a land where you see aviation as you've never seen it before. It's a land that, during its development, has depended almost entirely on the airplane. Commercial fishermen use it, as do miners, construction workers, Eskimos, salesmen—everyone. If you want to go somewhere, you fly. All classes of mail and freight are carried. The weather is often stinking, but the pilots are good. They separate the men from the boys in Alaska.

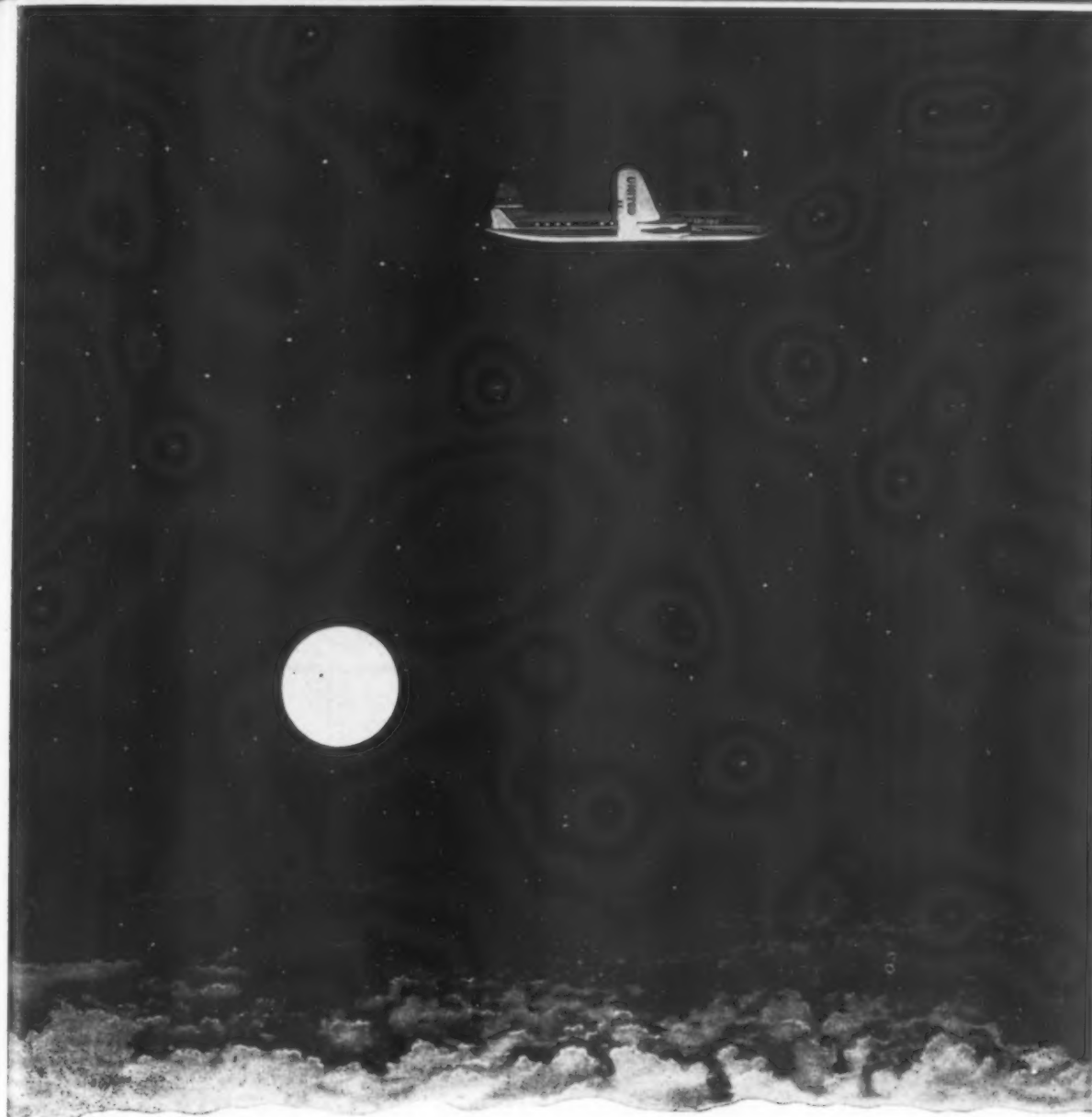
On the way here from Seattle on Pacific Northern Airlines' DC-4, the crew (Jack Dean and George Strobel) flew us up Amber Airway 1 instead of over the water. This takes you just off the coast of southeastern Alaska, with its 15,000-foot snowcaps and glaciers. This flight is a tourist's dream—scenery you see few places in the world. As a matter of fact, the scenery all over Alaska is terrific, and the tourist business here should boom when the Territory is ready for it, which it isn't now. There is a crying need for accommodations, and when they're adequate, some promotional work will have to be done. But the product should be a cinch to sell.

From the time we left Washington, the planes in which we have ridden have been getting progressively smaller—DC-6, DC-4, DC-3, Grumman Goose, twin Cessna, Noorduyn Norseman on floats, and a Stinson Station Wagon on floats. Our first experience with bush flyers was in the Bristol Bay area near Naknek and Dillingham. Dennis Fenno, owner of Bristol Bay Airlines, a bush operation, flew us up the Nushagak River to the Eskimo village of Ekwok. He handled the Norseman on the river in a high wind as though there was nothing to it—a routine operation for Fenno, who serves such villages regularly. Ralph Brumbaugh, one of Fenno's pilots, flew us to Nonwhynuk Lake. The landing wasn't so bad, but taking off into the howling wind and the breakers was no small thrill—enough to jar your teeth loose. Sometimes you lose airplanes this way, we're told.

What does a bush pilot look like? In the present season, his trademark is a pair of hip boots—for wading out to his float plane, and also handy in the mud—an old jacket and shirt, and equally old pants stuffed into the boots. Generally a couple of days' beard. He's ready to take you where you want to go when you want to go, provided there's enough room between the ground and the ceiling so he can squeeze his airplane through. He knows the country like the back of his hand—he has to if he wants to stay alive.

Almost all of the famous names in Alaska seem to have been connected with bush flying—Eielsen, Wien, Gillam, Woodley, Merrill, Reeve, to name only a few. Some of the old bush pilots are now the heads of sizeable airlines, but plenty of others have stepped into the bush operations. The airlines have instrument authority on some routes, but the bush flyers operate contact. This means flying up the valleys, on the deck, probably using a stream to guide you.

Some small idea of Alaskan flying can be gained on a trip from Anchorage to Seward. We made the flight in Cordova Air Service's Grumman Goose, accompanied by Merle ("Cordova") Smith, president. It's a beautiful ride, mostly through Resurrection Pass, with the mountains towering on both sides and the glaciers so close that it seems you can almost touch them. At Seward, the Goose plunks down on a rough 2,200-foot gravel strip—the "airport." We were lucky—we came through the pass at 2,000 feet. "Sometimes," observed Graham Mower, our pilot, "we have to get down rather low in here." This, we understand from other people, is the understatement of the week. Anyway, there's no instrument operation through Resurrection Pass.



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AIRLINES OF THE U. S.

# U. S. LOCAL SERVICE AIRLINE REVENUES AND EXPENSES FOR APRIL, 1952

AIRLINES	TOTAL OPERATING REVENUES	PASSENGER REVENUES	MAIL REVENUES	EXPRESS REVENUES	FREIGHT REVENUES	EXCESS BAGGAGE REVENUES	NON-SCHEDULED TRAFFIC REV.	TOTAL OPERATING EXPENSES	AIRCRAFT OPERATING EXPENSES	GROUND & INDIRECT EXPENSES	* NET OPERATING INCOME BEFORE INCOME TAXES
All American	\$ 285,531	\$ 131,700	\$ 142,162	\$ 6,292	\$ . . .	\$ 611	\$ 3,096	\$ 324,877	\$ 155,799	\$ 169,078	\$ -39,346
Bonanza	98,715	45,716	48,790	157	1,061	451	2,296	97,875	43,484	54,391	839
Central	132,526	37,702	94,104	545	1,232	237	1,517	156,778	65,412	91,366	-24,252
Empire	89,174	40,064	46,374	727	1,333	193	1,433	84,582	43,785	40,797	4,985
Frontier	409,120	139,810	247,925	1,860	12,314	1,065	4,192	373,697	178,710	194,987	29,423
Lake Central	87,276	24,799	52,605	1,718	.. .	369	2,363	107,927	50,202	57,725	-20,651
MCA*	70,476	46,421	20,051	1,016	968	161	1,680	86,885	32,656	54,229	-16,409
Mid-West	Figures not yet available. Data will be reported later.										
Omak	236,626	57,066	177,407	1,758	.. .	375	.. .	221,286	118,832	102,454	15,340
Piedmont	330,029	248,855	71,027	3,085	2,946	2,087	1,280	335,799	176,466	159,333	-5,730
Pioneer	323,022	229,262	78,260	2,197	5,570	1,960	.. .	312,542	141,806	170,736	10,480
Robinson	158,224	74,682	61,602	2,031	1,169	171	1,954	169,398	93,787	75,611	-11,174
Southern	220,468	90,237	124,174	3,635	.. .	523	1,428	255,539	128,906	126,633	-35,071
Southwest	208,226	158,254	43,225	2,281	5,063	607	1,385	221,338	101,548	119,790	-13,112
Trans-Texas	219,135	71,842	135,627	1,109	2,427	546	4,112	213,658	98,347	115,311	5,476
West Coast	119,348	66,104	47,863	671	2,021	211	2,224	110,563	48,330	62,233	8,785
Wiggins	25,464	1,501	23,401	281	.. .	.. .	184	24,274	8,733	15,541	1,190
Wis. Central	195,743	95,908	95,155	4,203	.. .	354	.. .	216,135	101,288	114,847	-20,392
TOTALS	3,203,103	1,553,643	1,509,752	33,566	34,771	9,921	29,144	3,313,113	1,588,091	1,725,022	-110,012
Hel. Air Service	45,153	.. .	45,345	.. .	.. .	.. .	.. .	35,244	21,643	13,601	9,909
Los Angeles	26,762	.. .	26,762	.. .	.. .	.. .	.. .	28,749	13,626	15,123	-1,987

\* Figures cover local service segment (route 106) awarded MCA by CAB in the Parks Air Lines Investigation Case.

NOTE: Figures are taken from monthly reports filed by the airlines with CAB. Data are tentative and subject to later change.

## SUMMARY OF U. S. LOCAL SERVICE AIRLINE TRAFFIC FOR APRIL, 1952

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	MAIL TON MILES	EXPRESS TON MILES	FREIGHT TON MILES	TOTAL TON MILES	TRAFFIC	AVAILABLE TON MILES	% AVAILABLE TON MILES USED	REVENUE PLANE MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED
All American	14,830	2,112,000	5,836,000	36.18	5,208	8,819	.. .	220,805	666,972	33.11	277,905	286,041	95.00	
Bonanza	3,354	556,000	1,950,000	43.90	616	108	2,178	84,518	192,763	43.85	79,654	77,340	98.34	
Central	3,418	667,000	2,563,000	26.02	2,106	702	2,184	69,914	292,920	23.87	122,050	120,740	98.69	
Empire	4,782	884,000	2,182,000	40.51	2,305	1,415	.. .	87,695	237,475	36.93	103,905	102,420	99.83	
Frontier	9,839	2,519,000	7,725,000	32.61	8,329	6,200	41,754	309,320	618,082	50.05	368,692	370,740	97.91	
Lake Cent.	2,960	555,000	2,279,000	24.35	1,097	3,496	187	58,780	269,341	21.82	114,467	110,040	97.38	
MCA*	3,809	776,000	1,818,000	42.68	1,523	2,276	3,344	81,105	182,991	44.32	76,246	76,905	96.59	
Mid-West	Figures not yet available. Data will be reported later.													
Omak	6,053	985,000	5,597,000	17.60	3,383	4,734	.. .	100,349	551,864	18.18	223,880	235,036	93.94	
Piedmont	18,449	4,164,000	8,588,000	48.49	7,494	7,717	8,963	423,315	981,461	43.13	408,942	406,863	99.44	
Pioneer	15,173	3,919,000	8,123,000	48.25	11,638	3,524	15,823	424,594	812,314	52.27	338,464	338,754	99.70	
Robinson	7,488	1,243,000	2,842,000	43.74	2,617	3,978	2,203	122,116	289,863	42.13	137,049	143,149	92.47	
Southern	9,810	1,670,000	5,714,000	29.23	7,545	8,100	.. .	175,438	516,177	33.99	272,102	272,220	99.63	
Southwest	15,704	2,849,000	4,378,000	65.08	7,087	3,791	11,011	307,807	500,350	61.52	208,479	202,757	98.49	
Trans-Texas	6,408	1,442,000	4,749,000	30.36	5,344	2,077	11,758	161,751	542,830	29.80	226,179	219,420	99.69	
West Coast	7,910	1,209,000	2,547,000	47.47	824	1,120	2,633	113,941	245,526	46.41	122,127	118,710	99.58	
Wiggins	223	12,000	66,000	18.18	94	139	.. .	2,391	14,086	16.97	33,536	46,384	71.21	
Wis. Cent.	11,483	1,746,000	3,705,000	47.12	6,775	10,203	.. .	181,744	423,600	42.90	176,500	179,336	97.18	
TOTALS	141,693	27,608,000	70,662,000	39.07	73,985	68,399	102,038	2,925,583	7,338,615	39.86	3,290,177	3,306,855	97.50	
						<u>Helicopter Mail Service</u>								
HAS	.. .	.. .	.. .	.. .	2,568	.. .	.. .	2,568	6,165	41.65	30,877	30,905	99.91	
Los Angeles	.. .	.. .	.. .	.. .	3,722	.. .	.. .	3,722	7,802	47.71	20,586	23,220	88.66	
* Figures cover local service segment (route 106) awarded MCA by CAB in the Pan Am Air Lines investigation case.														
NOTES: Figures include both scheduled and non-scheduled operations.														

\* Figures cover local service segment (route 106) awarded MCA by CAB in the Parks Air Lines Investigation Case.

NOTE: Figures include both scheduled and non-scheduled operations.

## SUMMARY OF U. S. LOCAL SERVICE AIRLINE TRAFFIC FOR MAY, 1952

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	MAIL TON MILES	EXPRESS TON MILES	FREIGHT TON MILES	TOTAL TON MILES	REV. TRAFFIC	AVAILABLE TON MILES	% AVAILABLE TONMILES USED	REVENUE PLANE MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED
All American	15,367	2,271,000	5,486,000	41.39	4,758	9,645	...	236,736	626,930	37.76	261,221	268,698	92.36	
Bonanza	3,522	874,000	1,986,000	44.01	810	438	1,954	85,610	197,883	43.26	81,607	82,272	99.02	
Central	3,961	574,000	2,219,000	17.83	3,537	1,011	1,431	61,267	367,800	16.66	153,250	153,326	99.22	
Empire	4,842	951,000	2,280,000	41.71	1,934	1,572	...	92,073	248,081	37.11	108,546	105,834	99.98	
Frontier	10,598	2,690,000	8,293,000	32.44	9,639	7,692	47,315	334,968	791,614	42.31	394,428	404,054	97.36	
Lake Cent.	3,577	535,000	2,144,000	24.95	1,258	4,106	...	53,876	244,815	22.01	107,621	108,698	98.64	
MCA*	4,168	840,000	1,998,000	42.04	1,663	2,557	2,474	86,829	199,783	43.46	83,243	83,839	99.29	
Mid-West	Figures not yet available. Data will be reported later.													
Omak	7,138	1,212,000	5,785,000	20.95	4,092	7,445	...	124,910	570,433	21.90	231,413	232,934	97.67	
Piedmont	18,828	4,318,000	8,149,000	52.99	7,444	7,105	11,987	439,886	931,358	47.23	388,066	393,174	98.43	
Pioneer	15,891	4,056,000	8,339,000	48.64	9,919	4,144	15,990	437,320	833,930	52.44	347,471	347,428	99.94	
Robinson	8,039	1,363,000	3,105,000	43.90	2,965	4,865	1,913	130,378	313,840	41.54	147,867	151,154	94.75	
Southern	10,233	1,737,000	5,889,000	32.94	7,500	8,566	...	184,657	534,357	34.56	280,425	281,294	99.64	
Southwest	15,956	2,921,000	4,975,000	58.66	7,049	3,798	8,281	312,196	568,913	54.88	237,047	242,197	97.77	
Trans-Texas	6,321	1,482,000	4,876,000	30.41	5,325	2,169	6,231	162,530	556,991	31.22	232,063	226,724	99.46	
West Coast	8,931	1,392,000	2,777,000	58.56	1,003	1,022	2,165	127,376	229,745	55.42	113,627	111,019	98.59	
Wiggins	260	27,000	125,000	21.60	80	143	...	2,654	13,323	19.92	31,326	39,569	78.94	
Wis. Central	13,116	2,194,000	5,123,000	42.83	7,622	10,899	...	226,875	585,436	38.75	243,932	248,558	98.14	
TOTALS	150,768	29,437,000	74,150,000	39.70	76,598	77,137	99,341	3,100,101	7,815,192	39.67	3,443,153	3,480,782	97.78	
Helicopter Mail Service														
HAS	...	...	...	...	2,518	...	...	2,518	5,914	42.58	29,738	30,063	98.92	
Los Angeles	...	...	...	...	3,379	...	...	3,379	7,403	45.64	19,532	22,408	87.17	
* Figures cover local service segment (route 106) awarded MCA by CAB in the Parks Air Lines Investigation Case.														
MCA: Scheduled were curtailed during May because of nationwide gasoline shortage.														
Figures include both scheduled and non-scheduled operations.														

\* Figures cover local service segment (route 106) awarded MCA by CAB in the Parks Air Lines Investigation Case.

NOTE: Scheduled were curtailed during May because of nationwide gasoline shortage. Figures include both scheduled and non-scheduled operations.

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AUGUST 4, 1952



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## C&S May Lose Indiana Route Junction Point

The sudden importance of Anderson-Muncie-New Castle, Indiana, to Chicago & Southern Air Lines could not be recognized by the Civil Aeronautics Board recently and the point may be dropped from C&S' certificate or transferred to Lake Central Airlines.

Prior to the Delta-C&S merger agreement, Anderson was never served by C&S and the carrier, in a streamlining gesture common in the industry today, asked that the point be dropped from its certificate. Hearings were held and the case is now submitted to CAB for decision. But when the merger pact with Delta was reached recently, C&S found that Anderson would be an important route junction point for the merging systems.

Carrier then asked CAB for permission to withdraw the abandonment request. But the case was too far along and nothing in the record indicated the new-found importance of the city. Since it must rule on the official record before it, CAB could not consider the new arguments and denied the withdrawal.

## Revocation Hearings Set For Robin Airlines

Hearings on possible revocation of Robin Airlines' non-scheduled airline letter of registration will begin September 15 in Los Angeles, the CAB has announced. Company is involved in alleged violations of the Civil Aeronautics Act. It has also been involved in several accidents in the past year.

In a report just issued on one accident near Coburg, Ontario, Canada, CAB charged the accident to the crew's "incompetence" in flight planning and navigation, fostered by alleged failure of the company to check crew competency and provide proper flight training. This failure resulted in the crew becoming lost and making an off-course landing due to fuel exhaustion.

Preliminary report on another accident involving a Robin plane near La Habra, California, found that the accident involved a pilot with a medically restricted license.

## Broader Scope for Resort

Recent CAB decision in the Charter Tariff Investigation Case had the major effect of defining a broader operating authority in Resort Airlines' certificate previously considered limited to all-expense tour transportation.

Board ruling was that a new charter tariff of the company is lawful and that such operations exclusive of tour services, may rightfully be conducted.

## Southern Service Case Returned to CAB

The four domestic airlines which blocked CAB's most recent decision in the hotly-contested Southern Service to the West Case have consented to dismissal of their petition for review of the decision by the U. S. Court of Appeals for the District of Columbia Circuit.

Carriers were National, American, Delta and Continental. Their consent paves the way for dismissal of the proceeding by the Court in deference to re-trial of the case by CAB.

Controversial decision, which the Court stayed last April pending review, was a one-year award to Eastern for limited trans-Gulf operations and a southern transcontinental interchange service via Eastern, Braniff, and TWA. CAB recently re-opened the case subject to remand by the Court.

With both sides now agreeable to re-trial by CAB, there appeared little doubt the Court would turn the matter back to the Federal agency.

## MCA Gets Back Mail Pay, New Annual Rates

Additional back mail pay of \$116,000 has been proposed and new annual rates estimated to reflect a \$228,000 increase have been set for Mid-Continent Airlines by the Civil Aeronautics Board. In all, the new rates will yield MCA about \$1,876,865 annually, of which, according to CAB, \$1,468,000 would be subsidy and approximately \$409,000 service mail pay.

CAB expressed concern over the requirements for increased mail pay but indicated it felt the proposed merger of MCA into Braniff Airways, which the Board has approved, will effectively eliminate the problem.

## CAB Proposes Future Panagra Mail Pay Boost

An increase in future mail payments to Pan American Grace Airways has been proposed by the Civil Aeronautics Board, but the line has been ordered to refund approximately \$2.8 million in back payments prior to October, 1951. Under the new future rates, Panagra's annual pay will average \$2,223,000 as to about \$2 million under old rates.

Proposal still does not settle or propose immediate settlement of rates for Panagra's operations during the period January 7, 1947, through June 30, 1948. "Certain unresolved issues," CAB said, require severance from the current period and separate consideration.



World Routes of Philippine Air Lines, Spanning 2/3 of the World

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Air evacuation of wounded men from front lines to rear area hospitals is possible today with the development of the Chase Assault Transport.

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Combat infantrymen, quickly recognizing its unique value, dubbed it "Operation Lifesaver."



**CHASE AIRCRAFT CO., Inc.**  
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## Ask Consolidated Certificates for Merger

West Coast Airlines has asked the Civil Aeronautics Board to reissue certificates of it and Empire Air Lines in consolidated form to West Coast, effective August 1. Merger of the two lines has been approved by CAB subject to compliance with certain conditions which WCA claims it has fulfilled.

Closing date for transfer of Empire's stock to West Coast is August 1, and all of Empire's operation property will, on that date, be transferred to West Coast, according to WCA officials. From that date until "early September," WCA will operate the Empire system. In September, consolidated operations utilizing new route connecting links will be started.

### CAB DECISIONS

- **Chicago & Southern Air Lines** and Pan American World Airways denied reconsideration of order turning down their Chicago-Mexico City interchange proposal.

- **Caribbean-Atlantic Airlines** granted temporary exemption to serve Ramey Air Force Base on a flag-stop basis between San Juan and Mayaguez, Puerto Rico, for a one-year period.

- **Bonanza Air Lines** authorized to suspend service at Oceanside, California, until adequate airport facilities are available.

- **Chicago & Southern Air Lines'** final Latin American mail rate docket reopened to determine if current rates are excessive.

### CAB CALENDAR

**Aug. 11**—Hearing in Portland-Seattle Service Case (Northwest Airlines). Seattle, Washington. (Docket 2901 et al.)

**Aug. 11**—Hearing in Delta-Chicago & Southern Merger Case. Washington. (Docket 5546).

**Aug. 11**—Hearing in Compania Cubana de Aviacion, S. A. Foreign Permit Amendment Case. Washington. (Docket 5587).

**Aug. 12**—Hearing in Braniff Airways Final Mail Rate Case. Washington. (Docket 5142).

**Sept. 3**—Hearing in Reopened North Central Route Investigation Case. Washington. (Docket 4603 et al.)

**Sept. 3**—Hearing in Large Irregular Air Carrier Investigation. Washington. (Docket 5132 et al.)

**Sept. 8**—Hearing in Trans-Atlantic Final Mail Rate Case (Pan American and TWA). Washington. (Docket 1706 et al.)

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Aircraft Engine & Parts Corp.  
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Durham Aircraft Service, Inc.  
Lear, Inc.  
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- 5 *Consecutive Issues*  
Air Associates, Inc.  
Air Carrier Engine Service, Inc.  
Bendix Products Division  
Denison Engineering Co.  
Esso Export Corp.  
Teco, Inc.





AMERICAN AVIATION PUBLICATIONS' editor and publisher, Wayne Parrish, greets W. A. Patterson, president of United Air Lines as UAL's Hal Nourse looks on. In center, Otis Kline (left) of UAL chats with A. L. Valder, BOAC. At far right, Mr. Bateman, Chicago & Southern, and George Vest of CAA.



FOUR DISTRICT sales managers get together. From left to right are George Stayman of Delta, Ivan Powers of Braniff, UAL's Morgan Nickell, and Robert M. Cann of Philippine Air Lines.

## Housewarming for the Guide

**T**O MARK the opening of new and larger offices for its *Official Airline Guide* in Chicago, American Aviation Publications staged a housewarming party on June 30. About 100 airlines people from the Chicago area attended. The *Guide* is almost 10 years old now, prints about 27,000 copies monthly for world-wide distribution, and has grown to 448 pages per issue. The new offices are in the same building as the old ones—139 North Clark Street, in the Loop.

*Photos courtesy of United Air Lines*



SERIOUS DISCUSSION takes place between Fernando Capdevielle of AA and Charles Bulterman of KLM at left, while in the center is Donald Duff of Wisconsin Central. At the right George Stayman, Delta, Harry Cooper, SAS, and S. G. King, AA, share a serious moment.



THE GUIDE'S PRINTERS, James Armitage and Carl Dunnagan of Inland Press attended (at left). AAs' Capdevielle and A. G. Swope of Thomas Cook & Sons, Inc., got together (center), and at the right Jack Busse, KLM, and Richard Fernald, UAL, take time out for a talk.

# People

## OPERATIONS-MAINTENANCE

**James M. Reilly** promoted by American Airlines to superintendent of telecommunications at New York.

**John T. Shannon** is now operations manager-Atlantic Division for Pan American World Airways. He succeeded **Capt. Sam H. Miller** who returned to flight status August 1.

**Joseph A. McMillan** and **Paul D. Hoover** have been named managers of operations by American Airlines at Roanoke and Tri-Cities, respectively.

**James T. Scholtz** has been appointed regional manager for Pan American-Grace Airways South American activities, with headquarters in Lima.

**Warren E. Kraemer**, former assistant to the president of Braniff Airways, has been named general traffic and sales manager by Scandinavian Airlines for all the line's North American operations. He will make his headquarters in New York.



Kraemer



Nelson

**Byron E. Nelson**, chief of passenger service for United Air Lines at Chicago since 1951, named to the position of assistant district passenger service manager for the company at Los Angeles.

## ADMINISTRATIVE

**Nelson David**, who recently resigned as PAA's Central European regional director to join Alaska Airlines as general manager, is also to be elected president of the company, **R. W. Marshall**, board chairman, has announced.

**George T. Cussen**, vice president of The Flying Tiger Line, is now serving as an air transportation consultant to

**J. D. Small**, chairman of the Munitions Board, on a no-compensation basis. His work with the Board is to be on transportation mobilization planning.

**C. C. Hubbard, Jr.**, has been named acting executive secretary of the Air Traffic Conference of America pending election of a successor to the late **Mer-rill F. Redfern**.

**H. E. ("Pat") Patterson**, formerly with Military Air Transport Service and for two years PRO for Naval Air Training, has moved to Australia and is now manager of public relations for the Claude Mooney Advertising Agency in Melbourne. Patterson had various industry connections before entering the service.

**Hans Monhardt** is newly appointed manager of Swissair's administration department in New York.



Scholtz



Kafka

## TRAFFIC & SALES

**Egon E. Kafka**, traffic and sales rep. for Eastern Air Lines, promoted to regional agency representative in Chicago.



AMERICAN AVIATION with this issue begins an "Honor Roll" in recognition of those individuals who have had continuous service in the industry with the same company or predecessor companies for 20 years or more. In order that as complete a coverage as possible may be maintained, notification of those reaching the 20-year service ranks should be made to the Editor prior to the anniversary month.

The following airline employees recently completed 20 years or more of service in the industry with the same company:

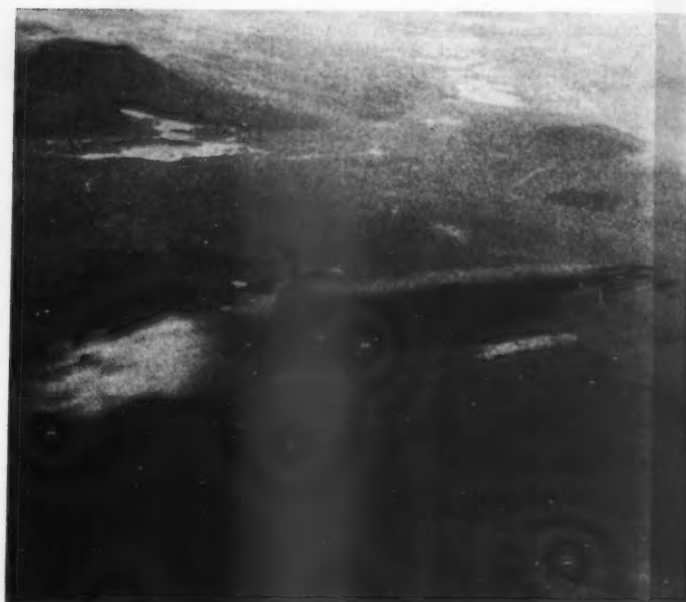
- **Charles E. Ferry**, United Air Lines. Assistant foreman-line maintenance, San Francisco. 25 years.
- **E. M. Gordon**, United Air Lines. Manager-purchasing & stores, San Francisco. 25 years.
- **W. P. Hoare**, United Air Lines. General manager of maintenance. 25 years.
- **R. C. Wright**, United Air Lines. Assistant treasurer, Chicago. 25 years.
- **Captain F. P. Jones**, United Air Lines. Flight manager, San Francisco. 20 years.
- **Captain L. H. Letson**, United Air Lines. Based at Los Angeles. 20 years.
- **G. H. Macomber**, General traffic manager of LAMSA, United Air Lines' Mexican subsidiary. 20 years.
- **H. A. Strzelecki**, United Air Lines. Technical staff assistant, Denver. 20 years.
- **William H. Martin**, Pan American World Airways. Chief draftsman, Latin American Division, Miami. 20 years.
- **James M. Reilly**, American Airlines. Supt. of Telecommunications, New York. 20 years.



**Medical Committee** of IATA, shown at recent meeting, includes (seated), Chairman Sir Harold Whittingham, BOAC, flanked by Vice-Chairman Dr. K. E. Dowd, TCA, and Dr. Armand Robert, Air France. Standing from left to right are the Doctors M. Hassamin, Misrair; K. M. Slotboorn, KLM; T. Bernardo, Philippine Air Lines; J. Tillisch, NWA; M. Baeza, Linea Aerea Nacional; G. Kidera, UAL; H. Dye, TWA; H. Hannisdahl, Scandinavian Airlines; C. P. Fenwick, CPA; A. Buchanan-Barbour, BEA; F. H. Shillito, PAA; A. Allard, SABENA; and Secretary J. A. Henderson.



**YB-52 takes off** during second phase of performance test flying from Seattle. Four-piece wing flaps can be seen in extended position for takeoff. Wing span is 185 feet, length 153 feet, and height 48 feet. To date two experimental prototypes have been finished.



**Rocket smoke** hides a fighter. A split second after firing, exhaust gases stream back from nose of USAF Lockheed F-94C Starfire interceptor. Now in production, Starfire can carry 24 Aeromite 2.75-inch rockets.

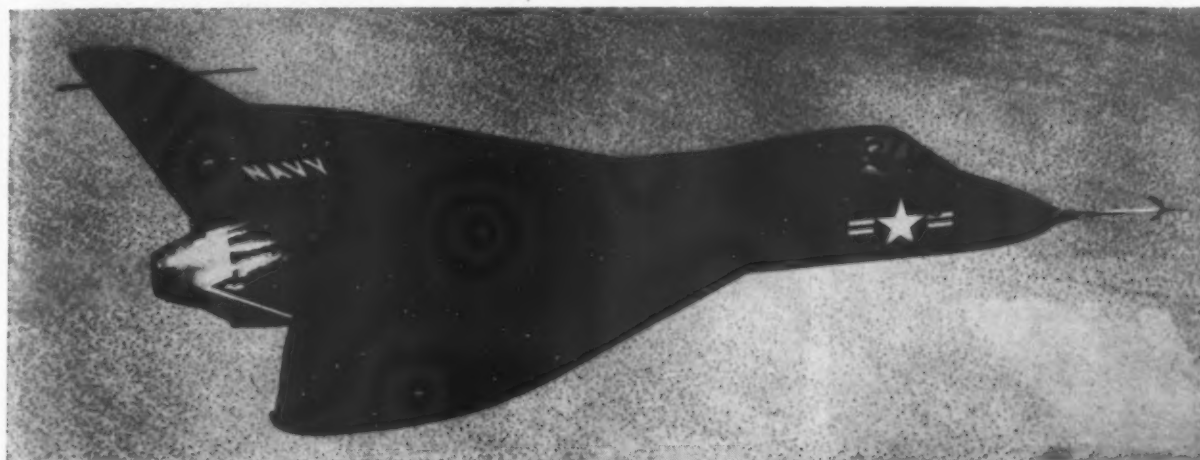
## Jet Picture World



**Rated over 600 mph,** Lockheed F-94C is shown braking to fast stop with tail parachute augmenting normal wheel brakes.



# Production Spotlight



DOUGLAS XF4D-1, carrier-based jet interceptor, shown in first flight picture.

## Airframe Sales Up 42%, Profit Slumps OPS Studies Alcoa Price Boost Requests

The 12 leading airframe manufacturers in 1951 increased net sales by almost \$600 million over 1950, a jump of 42.6%, but their net earnings dropped from \$62.6 to \$30.9 million during the same period. An Aircraft Industries Association survey also indicates one big reason for the decline in net profit was the increase in Federal taxes, which moved from \$48.5 million in 1950 to \$68 million last year. Federal taxes in 1951 accounted for 69% of the difference between total income and net profit for the 12 companies.

Pointing up how poor the rate of return is in the aircraft industry, the AIA study proves the 12 firms realized an average of \$1.60 profit for every

\$100 in sales last year. A similar analysis by the National City Bank of New York for 1951 shows that 1,763 leading corporations had an average profit of \$6.20 for every \$100 in sales.

AIA's survey finds the dozen aircraft companies had to add \$41,600,000 in new plant facilities during the year to handle increased production and many had to establish extensive lines of bank credit to finance this expansion. This investment, says AIA, may "involve a considerable financial risk to the individual companies" if the facilities are not needed for at least five years. The accompanying table shows the changes experienced by the aircraft industry since World War II.

OPS officials are studying a request by Aluminum Co. of America for a price boost of 10% on aluminum ingot and fabricated aluminum, and two cents a pound on aluminum pig—a request which, if granted, will up the already high cost per pound of airframes.

Other factors which will definitely send the airframe per-pound cost up are the inevitable rise in steel prices (after the current walkout is settled) and higher pay now being won by labor.

Alcoa, which asked that the aluminum increases be considered on an industry-wide basis, is basing its application on a new agreement with the AFL-Aluminum Workers which ties higher wages to approval of an OPS-permitted price increase.

### Income Accounts, 12 Major Airframe Companies, 1946-1951

(Millions of Dollars)

	1946	1947	1948	1949	1950	1951
Net sales	\$ 519.0	\$ 545.0	\$ 843.4	\$1131.7	\$1388.2	\$1979.3
Operating profit <sup>a</sup>	(43.5)	(97.8)	23.8	56.7	110.2	93.9
Total income <sup>b</sup>	(35.2)	(115.4) <sup>c</sup>	26.5	57.9	111.1	99.1
Contingencies	1.8		1.9	.1		
Total Federal taxes, net	cr26.3	cr73.5	21.8	21.7	48.5	68.0
Net profit <sup>c</sup>	(10.7) <sup>d</sup>	(41.9) <sup>d</sup>	2.4	36.1	62.6	30.9

Figures in parentheses are deficits.

<sup>a</sup> Operating profit represents all profits derived from operations.

<sup>b</sup> Total income includes non-operating income or loss (before contingencies, Federal taxes, special charges, etc.).

<sup>c</sup> A major portion of the income under military contracts is subject to renegotiation. Many contracts in progress are subject to price redetermination. All profit statements are therefore tentative only.

<sup>d</sup> Excludes special income credits (portion of reserves for contingencies provided in former years and no longer required.)

<sup>e</sup> Includes losses on abandonment of airplane projects by one manufacturer.

cr—Includes tax carry-over credits

Source: Data in above table taken from individual company reports.

### Lightplane Totals Up

A total of 291 one- to ten-place personal and executive aircraft were delivered in May for a total dollar value of \$2,696,000, according to the Utility Aircraft Council of Aircraft Industries Association.

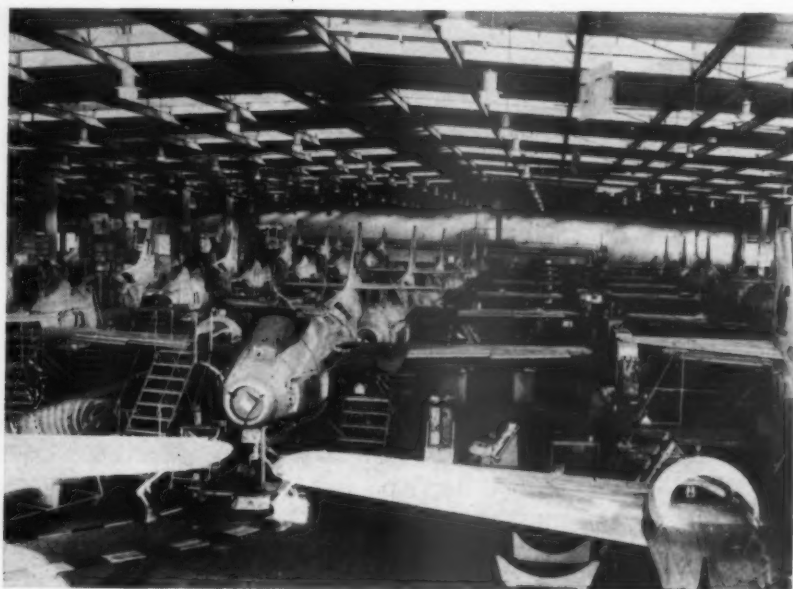
Four companies including Aero Design, Beech, Cessna, and Piper were involved in the shipments, of which 200 were four-place or more and 91 were one- and two-place aircraft. The May shipments showed an increase over the previous month when six companies shipped 270 planes for a value of \$2,344,000.



# International Report



**Svenska Aeroplan AB** has the SAAB-29 "flying barrel" jet fighter in full production. SAAB mainly handles final assembly of the 29, using a "marriage" jig to put together the nose, center, and rear sections of the fuselage. The complete fuselage is then lifted out of the jig and onto



a trolley running on rails, which it does not leave until the whole plane is ready for test flying. After installation of components (landing gear, control pedestal, instrument panel, pilot's seat, electric junction boxes, engine unit, tanks, etc.) the planes move forward in pairs for final assembly.

## USSR Kuibishev Area Has 11 Aircraft Plants

There are now eleven aircraft industry plants (including at least three underground) in the Kuibishev area of the Soviet Union. Factory No. 1, the "Stalin" plant, is producing about two MiG-15 fighters a day, and No. 18 (the former Ordzhonikidze factory) is believed to be still building attack bombers (at the end of 1950 it was turning out one Ilyushin Il-10 a day); both use the same three-runway field on the northern perimeter of Kuibishev.

An underground factory near Krasno Glinka (eight miles northwest of the city) is building about 10 gas turbines a day, and another plant west of Nos. 1 and 18 is producing piston engines. Plant No. 11 in the Volga-Samara triangle is manufacturing pumps, carburetors and instruments. An engine test station is installed in a small factory in a southern suburb of Kuibishev.

Another plant is engaged in rocket development and two others are manufacturing aircraft armament equipment and ball bearings, respectively (the armament plant is a few miles west of Nos. 1 and 18). Two underground plants (No. 42 and the nucleus of the

former No. 23 moved from Leningrad) are building aircraft components. Factory No. 27 is manufacturing instruments and repairing aircraft.

## German Governments May Finance Airline

The future German airline is likely to be financed by the West German federal government, state, and municipal authorities rather than by private capital. One high German official recently visited the United States to look over American transport equipment and others will soon go to England for a similar survey. However, no decisions on equipment procurement will be taken for some time to come.

Until the "peace contract" has been ratified and Germany is formally permitted to get into the air again, nothing definite whatsoever will be settled. However, it is most unlikely that any foreign carrier—American or European—will be permitted to help the new German airline to get going. This is a very delicate question of major political significance in Germany where there is considerable fear of antagonizing one nation by accepting assistance from another. More-

over, Germans connected with the aviation business (particularly ex-Lufthansa men) feel that Germany has the technical know-how to rebuild its airline system without foreign aid.

It is now virtually certain that Germany will initially fly medium-stage routes in Europe rather than start right away on intercontinental operations. Domestic services take a back seat in German airline planning as no German carrier will be allowed to fly the most lucrative domestic routes—those linking Berlin with the West.

## BEA Executive Rates Ambassador High

After the three initial months (March 13 to June 13) of scheduled operations with the Airspeed Ambassador, Peter G. Masefield, chief executive of British European Airways, has rated that aircraft "very good indeed." In this period the Ambassadors (known as Elizabethans by the corporation) logged 1,640 revenue hours and carried 20,100 passengers in flying 301,000 aircraft miles.

Shortage of certain spares caused

AMERICAN AVIATION

the main difficulties during these initial operations. The major "bugs" included some electrical and radio faults, wearing of brakes, and the cabin's becoming rather hot at moderate altitudes on warm days. As a result of stripping the first pair of Bristol Centaurus engines up for overhaul, the hours between overhaul have been extended from 250 to 500 "with more to come quite soon."

Chief item still to be improved is "cooling drag" which remains too high. Cruising speed should be increased by at least 10 mph as a result of current development work.

## TAI Wants Armagnacs For Overseas Routes

After extensive operational tests, Compagnie de Transports Aeriens Intercontinentaux (TAI) has started negotiations with the French government to acquire four SE 2010 Armagnac transports.

The independent carrier wants to get the big four-engine planes under a provisional one-year agreement so as to give them long-term testing on routes to the French overseas territories: Paris-Casablanca-Dakar-Brazzaville and Paris-Saigon (the latter is subject to the Saigon airport runways being extended and strengthened to take the 160,000-pound take-off weight Armagnac).

The Armagnac which TAI has been testing—400 hours have been logged with an average utilization of five hours a day—will be handed back to its manufacturer, SNCA du Sud-Est, for overhaul (the plane's Pratt and Whitney R-4360 B13's are currently overhauled by BOAC) and refurbishing.

Under present plans TAI will get another Armagnac very soon which will be used to fly Mecca-bound pilgrims from Morocco to Jeddah. Later in the year two more planes will be delivered and the fourth will be handed over early in 1953. TAI is due to receive its three Douglas DC-6B's in April, May, and June, 1953. As soon as these planes have been delivered the company will sell its present fleet of five Douglas DC-4's.

## Silver City Expansion?

Silver City Airways, British automobile ferry operator, is seeking a way to enter the dollar market and would like to start flying in the Caribbean area (possibly between Florida and Cuba). To do this the company would probably have to operate through a U.S. associate. An initial step would be to get government approval for the projected service, and this might not prove easy.

## the bulletin board

**Undisplayed Advertising:** \$1.00 per line, minimum charge \$4.00. Cash with order. Estimate 30 capital letters and spaces per line; 40 small lower-case letters and spaces per line. Add two lines if Box Number is included in lieu of advertiser's name and address.

**Displayed Advertising:** \$10.00 per inch for less than 15 inches in one issue or in any 12-month period. For more than 15 inches, \$8.50 per inch; more than 30 inches, \$8.00; more than 60 inches, \$7.50; more than 90 inches, \$7.00; more than 120 inches, \$6.50. Space units up to full pages accepted in this section for classified-type advertising.

Forms close 20 days preceding publication date. Address all correspondence to Classified Advertising Department, AMERICAN AVIATION PUBLICATIONS, 1025 Vermont Ave., N. W., Washington 5, D. C.

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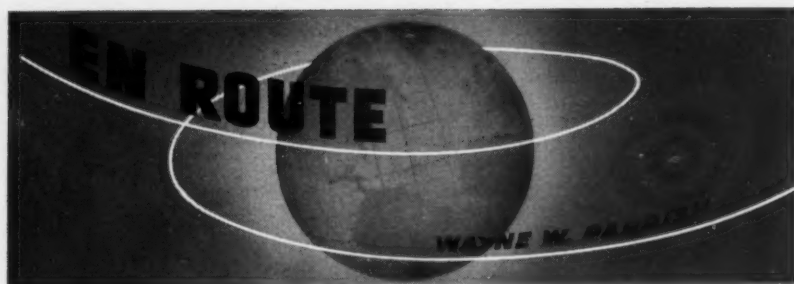
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**Truffles.** Just being a plain old country boy from the midwest I had a lot of new things to learn on that motor trip through France in May. Take truffles, for instance. Do you know what a truffle is? Well, I didn't. For all I knew a truffle could be a piece of pastry or the fins of an Amazon fish.

When my wife and I drove our little Vedette car into the cathedral town of Chartres, about 45 miles southwest of Paris, it was time for lunch, so we sought out a small but well recommended restaurant on a narrow street a block from the cathedral by the name of *Vieille Maison* (Old House).

I saw "omelette aux truffes" on the menu, so I finally confessed my ignorance to my wife. This confessing ignorance to my wife is an exceedingly painful experience which delights her for days on end and which she can recall at her feminine convenience many years later. Women are funny that way. It's always a tremendous triumph when she knows something I don't.

**Submission.** I reminded her that the mere knowledge of what is a truffle neither entitled her to an honorary degree from a university nor did my ignorance of what is a truffle detract from my otherwise high level of brilliance, and what in hell is a truffle, anyway. After the usual preliminaries of forcing me to bow down to superior intellect, a submission which I consented to at that point because my curiosity had gotten to the heated stage, I found out what is a truffle.

Don't think this knowledge isn't important. Truffles are found on just about every menu in France. Those French can't seem to make up a fancy dish without them.

**Just a Fungus.** A truffle, dear readers, is a fungus resembling a mushroom. It is jet black. It grows under the ground in woods at about the depth of potatoes. The French find them by leading pigs into the woods. The pigs smell these truffles, and dig them up, but just about the time the pig is ready to eat said truffles a Frenchman grabs them away from him, takes them home, cleans them off and soaks them in Madeira wine or some other wine. I understand dogs are also used to hunt down these truffles.

I saw a whole truffle once in a little hotel in a tiny village by the name of Les Eyzies where we stayed overnight. It was about the size of a big potato sitting in a glass container of Madeira wine and looked for all the world like something pickled in alcohol in a laboratory or a natural history museum.

**Tasteless.** The French take these truffles and cut them up into small bits and mix them with omelettes, and put them on hors d'oeuvres trays, and do all sorts of things with them. A truffle is decidedly a delicacy. But I had a lot of truffles before the trip was over and I never could get any taste at all. I think the pigs ought to get a crack at 'em.

My wife thinks this is heresy, but when I ask her what they taste like she has no answer, so why, then, go to all the trouble of eating truffles if they're tasteless? Anyway you've had today's educational lesson on French delicacies.

**Brandied Fruit.** Another thing about these French. On every menu you find fruit for dessert, such as pineapple or strawberries. After a nice meal your mouth waters at the thought of fresh strawberries, so you order some. Out come the strawberries floating in brandy and all you can taste is brandy.

Now I am not complaining about brandy, but I also like fruit. The French



SHOOTING for truffles

go to extraordinary lengths to souse the fruit so you can't taste it, so why bother, I ask, serve fruit at all? Just serve the brandy. Okay, go ahead. When you get back home and tell your friends you got pixied on fruit they won't believe you anyway.

**Peanut Potatoes.** Now here's another odd custom—odd to us, that is. In the U. S. if you order a baked Idaho potato and the waiter brings you a scrubby little spud you'll make him take it back to the kitchen and bring a big one. In France it's just the opposite. The most expensive potatoes are the smallest ones. You never see a big full-grown potato in France. In the markets you will see a shopkeeper ladle potatoes the size of a quarter and al-

ready peeled out of a tub of water. These are expensive delicacies. The bigger the potato the cheaper it is.

The same holds true for peas and carrots. The most expensive peas are very tiny pods with peas that have just barely begun to form. Big peas are never seen in France. Most carrots are quite small. The best tomatoes are small. The French never seem to want anything to grow to maturity, and yet the asparagus down south, just coming in season, in May, was the biggest and most delicious I've ever had.

**Buy for Today.** The year-round French diet isn't as well balanced as ours because the French, except in Paris, eat fruits and vegetables chiefly in season. They don't like canned goods and never have. Now don't write me a letter and say you've seen a lot of canned goods in France, because that much is true. But the consumption per person is far under that of the U. S. The average Frenchman still buys what he needs for today and lets tomorrow take care of itself.

The French markets are open seven days a week. Every morning everybody goes to market. Instead of buying enough potatoes for a week or two, the Frenchman will buy just enough for that day. Refrigeration is pretty short throughout the country and is still absent in many parts, so there is a day-to-day routine of buying and eating without having a big supply ahead in the house.

Those French can take the blue ribbon on one item. I found *glace fin champagne* in one restaurant and it was delicious. It was ice cream made with champagne.

**Ham Souffle.** Then there was the Croix d'Or Hotel (Cross of Gold) at Valence-sur-Rhone in Central France, where one of the *specialités* was a ham souffle, as fine a delicacy as you could want and quite unusual, too. If you stick to ordinary restaurants the menus may get monotonous, but with the *Guide Michelin* you can hunt for unusual items, the kind you never get in the U. S. They say that cooking is a genuine art. I never took much stock in that before, but I do now. France can produce some truly excellent meals.

**Pate de Everything.** Since strawberries and cherries were in season in May, and since it was difficult to get any in restaurants without picking them out of brandy, my wife would visit the local markets and buy kilos of these fresh fruits and take them to the hotel for washing. We'd then eat them on the road. Both cherries and strawberries were far cheaper than in the U. S., except in the de luxe shops.

In addition to having an obsession about truffles, the French go all out on pates. All I had ever heard of was *pate de foie gras* until I started this motor trip, and then I discovered all sorts of pates and most of them very good. *Pate de foie gras* is goose liver paste, and *pate de foie canard* is duck liver paste.

Down in the south of France I found a paste for everything that has a liver and even some things without livers. Each restaurant or hotel of distinction sells its own special pates. All of these pastes are very rich, of course, but the flavors are delicious.



# Around The World

## Japan Orders Comets

Japan Air Lines has ordered two de Havilland Comets for delivery in 1955. They will be used to inaugurate a Tokyo-London service. The company is also shopping for modern American equipment to use on projected routes to North and South America. Main stumbling block is Japan's lack of dollars; this was a factor in the Comet order.

As an interim measure JAL has arranged to buy two Douglas DC-4's from Pan American World Airways and would like to get two more to replace the leased aircraft now being operated under contract by Northwest Airlines on Japanese domestic routes. This contract will probably not be renewed when it expires in October.

A comprehensive route program has been elaborated by JAL linking Japan with Honolulu and Los Angeles with an extension to Mexico City, Panama, Lima and Buenos Aires; Hong Kong, Bangkok, Rangoon, Calcutta, Karachi, Cairo, Rome, Paris and London; and Okinawa, Manila, Singapore, and Jakarta (with Saigon as a possible additional intermediate).

## KLM Orders More Super Connies

KLM Royal Dutch Airlines has ordered three additional Lockheed L-1049 Super Constellations for delivery in 1954, supplementing the 10 already ordered for delivery in 1953. The additional aircraft will be required for growing migrant traffic to Australia and New Zealand.

The Super Constellation re-order means that KLM now has 28 American aircraft on order or being delivered (13 L-1049's, seven Douglas DC-6B's, two DC-6A's, and six Convair 340's).

## US-Japan Bilateral Draft Finalized

A final draft of the proposed bilateral air transport agreement between the United States and Japan is being submitted to the two governments for approval. Agreement was reached after thirty days of negotiation. Parleys on a parallel UK-Japan pact are still in progress.

## F-86 Simulator Order

Redifon Ltd. has received a \$3,000,000 contract from the Canadian government to build F-86 Sabre jet flight simulators. The British company will presumably obtain license rights from one of the American companies already manufacturing F-86 simulators—Engineering and Research Corp., Link Aviation Inc., and Westinghouse Electric Corp.

## New-Type Comet I's for French

The de Havilland Comet I's ordered by Air France and Union de Aeromaritime de Transport will be the new version as is being supplied to Canadian Pacific Airlines. This Mark IA has water-injection Ghost engines which enable take-

off weight to be boosted to 115,000 pounds. UAT also has on order Comet II's.

## TRANSPORT

Aer Lingus reports a record net profit equivalent to \$270,000 for its fiscal year ended March 31, 1952, against \$39,000 for the previous year. Gross revenue of the Irish flag carrier rose by \$900,000 to \$4,550,000 but operating expenses also increased—by \$680,000—"due to increased costs under almost every heading." Passenger revenue totalled \$3,800,000 (\$580,000 up) whereas cargo and mail revenues amounted to \$370,000 and \$204,000, respectively. Aer Lingus has on order four Vickers Viscounts and four Bristol 170 Wayfarers with a total value of \$4,400,000.

Air-India International made a net profit equivalent to \$800,000 in 1951 against \$420,000 in 1950. Air-India, the company's domestic associate, reported a loss of \$110,000 which chairman J. R. D. Tata partly blamed on excessive governmental control of operations.

Bharat Airways has been authorized by the Indian Air Transport Licensing Board to extend its weekly Calcutta-Bangkok service to Jakarta and to inaugurate a Calcutta-Rangoon-Bangkok-Hong Kong route.

Linee Aeree Italiane has opened a thrice-weekly Rome-Nice-Geneva service.

Air Commodore Sir Frank Whittle has resigned as honorary technical adviser on jet development to British Overseas Airways Corporation. He denied reports that he was intending to emigrate to the United States following alleged clashes with British officials on jet development techniques.

Swissair has contracted a \$4,000,000 bank loan to partially finance the four Douglas DC-6B's it has on order. A similar sum will be provided from company funds. The aircraft are being bought by Swissair directly, whereas the two DC-6B's currently operated by the airline are owned by the Swiss government and chartered by the carrier.

Britain's Privy Council has ruled that the 40 Chinese transports impounded at Hong Kong belong to Civil Air Transport, Maj. Gen. Claire L. Chennault's Delaware-registered company, and not to the Chinese Communist government.

## MANUFACTURING

SNCA du Nord has now completely taken over the Arsenal de l'Aeronautique, French nationalized experimental aircraft plant.

Prototype of the Iberavia I-115 trainer built in Spain by Aeronautica Industrial has made its first flight.

SNCA du Sud-Est's X-212 delta-wing fighter will be powered by an Atar turbojet. The company's Grogard II prototype will soon resume its flight test program with new armament including a battery of 24 rocket projectiles.



# News At Deadline

## Mexican Routes Sold By United Airlines

United Air Lines' Mexican subsidiary, Lineas Aereas Mexicanas S.A. (LAMSA) has been sold to a group of Mexican businessmen for an undisclosed amount. The new line, which began operations July 27, will be known as Lineas Asociados Mexicanas S.A.

United, which has been operating 2,500 miles of Mexican routes since 1943 with seven DC-3's, said that it had developed LAMSA with the idea of turning the line over to Mexican capital whenever such capital showed interest.

The new company will combine its administrative organization with that of Aeronaves de Mexico S.A., under the general managership of Carlos Ramos.

## Transport Section of APB Report Due Soon

Another section of the hotly debated Aircraft Production Board staff study on the reduction of the number of military production-type aircraft models (see page 11) is now in first-draft form and will soon be submitted to the APB. New section deals with transports, rather than fighters, bombers, and engines.

A similar study by the Research and Development Board was scheduled for submission to the Secretary of Defense on July 28.

The APB study, proposing that certain models be dropped from production to simplify production problems, was prepared by John Grieb and Henry Rau, advisors to William L. Campbell, acting chairman of APB. Their work aroused the ire of both the armed services, who resented what they felt to be civilian interference, and the larger part of the aircraft industry, some portions of which would be hard hit by the proposed changes.

The Air Force and Navy are expected to attack the report at an APB meeting scheduled for August 7.

## DC-6B and Super Connie To Race With Comet

The Douglas DC-6B and Lockheed Super Constellation will be entered in the 13,000-mile Air Race from England to New Zealand in competition with the de Havilland Comet II and other transport aircraft, according to the Canterbury International Air Race Council. Jacqueline Cochran is expected to fly the

Convair Turboline in the transport handicap section or the speed section. Paul Mantz, winner of two Bendix transcontinental races, and George Schwimmer, a Continental Air Lines pilot, are also likely contestants.

The DC-6B and Constellation will be entered by KLM Royal Dutch Airlines, which may also enter a Convair-Liner. BOAC and de Havilland are both expected to enter de Havilland Comets, and British European Airways may enter the turboprop Vickers Viscount.

## Convair to Build New Long Range Bomber

A new, unidentified long-range bomber will go into production at Consolidated Vultee's Fort Worth plant, and all production of the B-36, the mainstay of America's strategic striking force, will be phased out.

Only information on the new plane is that it is a new model and is not the YB-60, for which there are no production plans. Speculation is that it may turn out to be a supersonic jet.

Current production orders on the B-36 carry well into 1954, with modification work extending beyond that.

## Local Lines See Fare Cut No Solution

Local service officials met with Gordon M. Bain, director of CAB's air operations bureau, recently, to look for some way of off-setting rising costs, but took a dim view of his suggestion that they drop fares from six cents to four cents per passenger-mile.

Other possible revenue-boosting ideas that were explored included television promotion, toy helicopters for children, and certificates for first riders. Talk of using DC-3's for coach services provoked no enthusiasm.

The fare cut to four cents was opposed by most of those present. One official pointed out that such a cut would mean raising the DC-3 load factor from 50% to 75% in order for some carriers to realize the same amount of revenue.

## Fisher Joins PNYA

Herbert O. Fisher has left the position of executive director of the Corporation Aircraft Owners Association to join the Port of New York Authority as chief of the aviation development division of the aviation department.

## Venezuela to Buy 2 Comet II's

The Venezuelan national airline LAV signed a contract July 14 for the purchase of two de Havilland Comet II jet transports for delivery in 1955, thus becoming the first Latin American airline to order the British jet. LAV plans to operate a New York-Buenos Aires service via Caracas in competition with Pan American World Airways. Except for trans-Atlantic plans, this is the first Comet order involving the terminal of New York with other links in the Western Hemisphere.

## One-Year Limit Set On Merger Agreement

Colonial Airlines and Eastern Air Lines will wait one year for Government approval of the merger which they agreed to on July 18 (see page 21). If approval by CAB and the President is not forthcoming by July 18, 1953, the deal will be off.

The agreement, filed with CAB recently, is also designed to safeguard the participating lines against possible attachment by CAB of "conditions substantially affecting either party" and an "express condition precedent" that prior to the closing date the Bureau of Internal Revenue will rule that the stock transfer from Eastern to Colonial will not be considered either ordinary income or a capital gain.

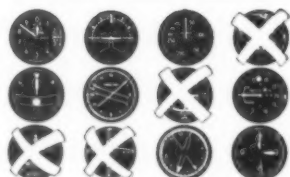
## Maintenance Meeting To Be Closed

In contrast with the open technical discussions held in the past, this year's Air Transport Association Maintenance and Engineering Conference at Miami Beach, September 23 to 25, will be a closed session for the discussion of general airline maintenance and engineering problems. Past sessions, which offered airlines and all manufacturers the opportunity to discuss in detail the current problems of aircraft systems and components, have been supplanted by meetings held with group manufacturers throughout the year.

Among the subjects planned for discussion are overhaul shop layout and expansion, personnel and equipment safety, effect of increased lead in aviation fuels, and labor relations. Half of the final day will be devoted to discussion of major policy matters with CAA in attendance.



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